NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

DMS-DR-2154
NASA-CR-134,437

HEAT TRANSFER TESTS OF A 0.0175-SCALE SPACE SHUTTLE ORBITER MODEL (29-0) TO DETERMINE THE EFFECT OF SURFACE TEMPERATURE ON BOUNDARY LAYER TRANSITION AT MACH 8.0 IN THE AEDC VKF TUNNEL B (TEST OH4A)

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANagement services
SPACE DIVISION CHRYSLER CORPORATION

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By

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Prepared under NASA Contract Number NAS9-13247

By

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New Orleans, La. 70189

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:	AEDC VKF Tunnel B Test VA352
NASA Series Number:	OH4A
Model Number:	29-0
Test Dates:	Part 1, 12 November 1973; Part 2, 5 December 1973
Occupancy Hours:	20

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ABSTRACT

Test OH4A was conducted in the Arnold Engineering Development Center (AEDC) von Karman Gas Dynamics Facility (VKF) Tunnel B. It consisted of heat transfer measurements on a 0.0175-scale model of the Space Shuttle Orbiter with the purpose of determining the effect of wall temperature on the point of boundary layer transition. The test was conducted at Mach 8 over a range of Reynolds numbers from 1.0 to 3.7 x 10^6 per foot.

Two regions of initial model wall temperature were investigated. Eighteen good runs were obtained at each region in support of the test objectives. Tabulated data are presented in this report along with a description of the test procedure. Preliminary data indicated that the initial model wall temperature did not obviously affect the point of boundary layer transition.

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INTRODUCTION

The surface of the Space Shuttle Orbiter is subjected to changing conditions, particularly temperature, during the cycle of launch, orbit, and return to earth. It is advantageous to know the effect changing temperature has on surface conditions. In particular, the point of boundary layer transition is of interest since a change from a laminar to turbulent boundary layer represents higher convective heating rates.

This investigation (test OH4A) was undertaken to determine the effect of model wall temperature on the point of boundary layer transition at Mach 8.0. Data were taken (at various Reynolds numbers) with model initial temperature at room temperature and approximately -300°F. The results of the investigation and test procedures are presented in this report.

NOMENCLATURE

Symbol	Plot Symbol	Definition
B		body
C		canopy or thermocouple gauge material specific heat (BTU/lbm-°R)
C_P		specific heat of tunnel airstream (BTU/lbm-°R)
	CONFIG	model configuration number
F		body flap
	GAGE	model thermocouple gage number
	GROUP	run number
h		heat transfer coefficient (BTU/ft^2-sec-°R)
H		Enthalpy (BTU/lb)
h_o	HREF-FR	theoretical stagnation point heat transfer coefficient (BTU/ft^2-sec-°R)
h	H(TO)	heat transfer coefficient at r = 1 (BTU/ft^2-sec-°R)
h/ho	H(TO)/HREF	ratio of heat transfer coefficient to theoretical stagnation point heat transfer coefficient
h	H(.9TO)	heat transfer coefficient at r = .9 (BTU/ft^2-sec-°R)
h/h_o	H(.9TO)/ HREF	ratio of heat transfer coefficient to theoretical stagnation point heat transfer coefficient
h	H(TAW)	heat transfer coefficient with r as a function of the local flow deflection angle (BTU/ft^2-sec-°R)
h/h_o	H(TAW)/ HREF	ratio of heat transfer coefficient to theoretical stagnation point heat transfer coefficient
K		thermocouple gauge material thermal conductivity (BTU/ft-sec-°R)
M		OMS pod

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
M	MACH NO	freestream Mach number
μ_∞	MU-INF	freestream viscosity (lb-sec/ft^2)
P		pressure (psia)
P_∞	P-INF	freestream static pressure (psia)
P_0	PO	freestream stagnation pressure (psia)
q_∞	Q-INF	freestream dynamic pressure (psia)
$\dot{q}(t)$	QDOT	heat transfer rate (BTU/ft^2-sec)
r		recovery factor
r_s		radius of a scaled one-foot sphere (ft)
R		gas constant (ft-lb/slug-°R)
Re	RE/FT	freestream unit Reynolds number (1/ft)
ρ_∞	RHO-INF	freestream density (slugs/ft^3)
ST	STFR	Stanton number
t		time (sec)
T		temperature or temperature difference (°R)
T_∞	T-INF	freestream static temperature (°R)
T_0	TO	freestream stagnation temperature (°R)
Tw	TW	model surface temperature (°R)
V_∞	V-INF	freestream velocity (ft/sec)
u		velocity in the x direction at the edge of the boundary layer
V		vertical tail

NOMENCLATURE (Continued)

Symbol	Plot Symbol	Definition
W		wing
x		distance along the curved surface of a sphere (ft)
X/L	X/L	axial location of thermocouple gauge
2Y/b	2Y/B	span wise location of thermocouple gauge
Δ		increment
μ		viscosity of air (lb-sec/ft^2)
π		constant
ρ		density (slugs/ft^3)
τ		dummy time variable of integration
		Angles
α	ALPHA-MODEL	model angle of attack
α_s	ALPHA-SECTOR	strut pitch angle
	ALPHA-PREBEND	sting offset angle
δ		local flow deflection angle
Θ		local model surface angle
ϕ	PHI	thermocouple gauge roll angle location measured clockwise from the bottom centerline looking forward
	ROLL-MODEL	model roll angle
	YAW	model yaw angle
		Subscripts and Superscripts
AW		adiabatic wall conditions
i		summation index

NOMENCLATURE (Concluded)

Symbol	Plot Symbol	Definition
in		initial conditions
o		stagnation conditions
w		wall conditions
∞		freestream conditions
'		conditions behind a normal shock

REMARKS

Test OH4A was conducted in two parts. Part 1 consisted of a series of runs with the initial model wall temperature near room temperature plus at attempt to complete the same series of runs with an initial model wall temperature of -300°F. Part 1 was terminated during the cold wall runs, primarily because of a discontinuity at the model nose/body joint due to thermal stresses and/or uneven thermal expansions. This discontinuity caused inconsistent perturbations in the heating rate data and also affected the boundary layer transition point. Other problems associated with the cold wall runs were frost formation on the model and microswitch freezing in the test section tank while the model was cooled. Part 2 consisted of the series of cold wall runs completed after changes were made to alleviate the problems mentioned above. The test conditions and test run schedule are presented in Tables I and II, respectively.

All problems encountered during the cold wall portion of Part 1 were successfully resolved for Part 2. The nose/body joint was welded onto the sides and lower surface to eliminate the discontinuity. The formation of frost was prevented by the following three changes:

(1) The model was injected into the airstream in an upright position instead of inverted.

(2) The liquid nitrogen manifold, used for cooling, was placed directly under the model at the same angle, allowing the model to be bathed in nitrogen until injection into the airstream.

(3) During Reynolds number changes, the model was sprayed with gaseous nitrogen at zero degrees Fahrenheit. This technique cleaned the model of condensation, thus eliminating the need to open the test section tank, and also periodically warmed the tank to prevent microswitch freezing.

CONFIGURATIONS INVESTIGATED

Model 29-0 is a 0.0175-scale replica of the Space Shuttle Orbiter designed to the -139 lines. Dimensional data for the model are shown in Table III and nominal dimensions are shown in Figure 1. The model was constructed of 15-5 PH stainless steel and sting mounted through its base. It is a thick skin heat transfer model designed to accommodate pressure taps, 1/4-inch diameter calorimeter gauges, and 1/8-inch diameter coaxial gauges. The rudder and elevon were not simulated for this model.

Nomenclature for model 29-0 is as follows:

B_{17}	Fuselage body (Configuration 3)
C_7	Canopy (Configuration 3)
F_5	Body flap (Configuration 3)
M_4	OMS pods (Configuration 3)
V_7	Vertical tail (Configuration 3)
W_{103}	Wing (Configuration 3)

INSTRUMENTATION

For test OH4A, the model instrumentation consisted of seventy-five AEDC 1/8-inch coaxial thermocouple gauges. The coaxial gauge is a surface chromel-constantan thermocouple which relates surface temperature to the incident heat flux by homogeneous, one-dimensional, semi-infinite slab theory. The coaxial thermocouple is shown in Figure 2.

The coaxial gauge locations are shown in Figure 3 and are tabulated in Table IV. All gauges are on the fuselage lower centerline, fuselage lower surface (left-hand side), or left wing lower surface.

A separate calibration was required for the thermocouple gauges at cold wall temperatures (-300°F).

FACILITY DESCRIPTION

The Arnold Engineering Development Center (AEDC) von Karman Gas Dynamics Facility (VKF) Tunnel B is a continuous-hypersonic-closed circuit wind tunnel with air as the test medium. It has a 50-inch diameter test section and is capable of nominal Mach numbers of 6 and 8. Models are injected into the test section from a tank directly below. Operating characteristics of Tunnel B can be found in Reference 1.

TEST PROCEDURES

The series of runs with the initial model wall temperature near room temperature were completed first and followed, after a delay, by the series of cold wall runs. For the room temperature runs, the model was injected inverted into the airstream for about three seconds to record data. It was inverted because of the blockage of the upright installation at low Reynolds numbers. The room temperature runs were completed without incident and immediately followed by an attempt to complete the cold wall runs (see Remarks section). The liquid nitrogen manifold, used for cooling the model, was located on the sidewall of the tunnel test section tank, which required that the model be rolled with the bottom surface facing the manifold for cooling and then returned to the inverted position for injection. This procedure contributed heavily to the formation of frost on the model due to the time delay.

After the problems responsible for the test delay were resolved, the cold wall runs were completed. A new approach was used which allowed the model to be positioned upright (at 30° alpha) in the test section tank directly over the liquid nitrogen manifold. After cooling, the model was injected into the airstream, and no blockage problems were encountered. A cycling technique was devised during the test to decrease the cooling time of the model. First, the test section tank was evacuated until the liquid nitrogen started to solidify. Then the tank pressure was increased slowly to near atmospheric. This cycle was repeated until the model wall temperature reached -300°F, at which time the tank was evacuated

again to obtain the pressure differential needed to open the test section safety doors and inject the model (tunnel pressure ≈ 0.1 psia and tank pressure ≈ 0.15 psia during injection).

Normally two cycles were required before the model started cooling, possibly due to gas purging from the liquid nitrogen system. Another technique used was to blow gaseous nitrogen from the tank door onto the model during Reynolds number changes (tunnel total pressure and total temperature changes). The gaseous nitrogen was at approximately zero degrees Fahrenheit and served two purposes: (1) it cleaned the model of any condensation and (2) it periodically warmed the test section tank, which prevented microswitch freezing and eliminated any need to open the tank door. It was found that with longer model cleaning time, less condensation developed on the model during runs.

DATA REDUCTION

Surface temperatures measured by the coaxial thermocouple gauge are related to the incident heat flux by homogeneous, one-dimensional, semi-infinite slab theory. The heat flux is expressed by the following (Reference 2):

$$\dot{q}(t) = \frac{\sqrt{\rho CK}}{\sqrt{\pi}} \left[\frac{T(t)}{\sqrt{t}} + 1/2 \int_0^t \frac{T(t) - T(\tau)}{(t-\tau)^{3/2}} d\tau \right] \qquad (1)$$

Where: $T = Tw - Tw_{in}$

Values of T were calculated by converting gauge outputs in millivolts to temperatures using curve fits of temperature versus millivolt tables for chromel-constantan thermocouples. The thermocouple gauge outputs were recorded on magnetic tape at a rate of twenty times per second.

Reference (3) provides a concise numerical technique for obtaining heat flux from a surface thermometer output. When applied to Equation 1, the solution is:

$$\dot{q}(t) = \frac{\sqrt{\rho CK}}{\sqrt{\pi}} \left[\frac{T(t)}{\sqrt{t}} + \frac{T(t)-T(t-\Delta t)}{\Delta t^{1/2}} + \sum_{i=1}^{n-1} \left\{ \frac{T(t) - T(t_i)}{(t - t_i)^{1/2}} - \right. \right. \qquad (2)$$

$$\left. \left. \frac{[T(t) - T(t_{i-1})]}{(t-t_{i-1})^{1/2}} + (2) \frac{[T(t_i) - T(t_{i-1})]}{(t-t_i)^{1/2} + (t-t_{i-1})^{1/2}} \right\} \right]$$

Where: $T = Tw - Tw_{in}$

Values of $\dot{q}(t)$ were calculated using Equation 2 and a time increment of 0.05 second averaged over a period of one second.

Heat transfer coefficient, h, was calculated by:

$$h = \frac{\dot{q}(t)}{T_{AW}-T_W} \tag{3}$$

Where: $T_{AW} = rT_o$

The recovery factor, r, was a function of the local flow deflection angle at each gauge location. With the exception of gauge number 13, where r = 0.9, the recovery factor is defined by:

$$r = \frac{T_{AW}}{T_o} = 0.867 + 0.133 \sin^{1.55}\delta \tag{4}$$

Where : $\delta = \alpha + \Theta$ = local flow deflection angle.

α = model angle of attack

Θ = local model surface angle

Values of Θ for each gauge are given in Table V.

Heat transfer coefficient ratios, h/ho, were calculated using:

$$h_o = \frac{\dot{q}o(t)}{T_{AW}-T_W} \tag{5}$$

Where:

$$\dot{q}o(t) = 0.94\,(\rho_W\mu_W)^{.5}\,(\rho_o'\mu_o'/\rho_W\mu_W)^{.4}(Ho-Hw)\,(du/dx)^{.5} \tag{6}$$

With:

$$\mu = \frac{0.0232 \times 10^{-6} T^{1/2}}{(1 + 220/T)} \tag{7}$$

$$\frac{du}{dx} = \left(\frac{1}{r_s}\right) \left[2 RT \left(1 - P_\infty/P_o\right)\right]^{1/2} \tag{8}$$

The Stanton number was calculated by:

$$ST = \frac{ho}{\rho_\infty U_\infty C_p} \tag{9}$$

The freestream conditions including Reynolds number were calculated using equations shown in Reference 4 with measured tunnel stagnation temperatures, stagnation pressures, and static pressures.

Raw data from the room temperature and cold wall series of runs were reduced using two different coaxial thermocouple gauge calibrations. This was necessary due to changes in gauge properties, $\sqrt{\rho CK}$ at the two different temperature regions.

A description of the tabulated data format can be found in the test nomenclature.

DISCUSSION OF RESULTS

The test OH4A tabulated data are presented in Appendix A. Although heat transfer coefficient data are also presented for recovery factors of 1.0 and 0.9, the primary interest here is the heat transfer coefficient data where the recovery factor varies with the local flow deflection angle, $H(T_{AW})$.

Plotted data from test OH4A are presented in Reference (5). The heat transfer coefficient $(H(T_{AW})/H_{REF})$ and temperature (T_w/T_o) ratios are plotted for various locations on the Orbiter fuselage and wing.

Since the purpose of this report is to present the test data, no conclusions can be stated regarding its content. However, it can be stated that the data obtained adequately met the test requirements. The preliminary data, reviewed at the test site, indicated no obvious effect on the point of boundary layer transition due to model wall temperature.

REFERENCES

1. "Test Facilities Handbook," Arnold Engineering Development Center, Ninth Edition, July 1971.
2. Carslaw, H. S. and Jaeger, J. C., Conduction of Heat in Solids, Second Edition, Oxford, Clarendon Press, 1959.
3. Cook, W. J. and Felderman, E. J., "Reduction of Data from Thin-Film Heat-Transfer Gages: A Concise Numerical Technique," AIAA Journal, Volume 4, No. 3, March 1966.
4. Ames Research Staff, "Equations, Tables, and Charts for Compressible Flow," National Advisory Committee for Aeronautics, Report 1135, 1953.
5. W. R. Martindale and L. L. Trimmer, "Test Results From the NASA/ Rockwell International Space Shuttle Test (OH44) Conducted in the AEDC-VKF Tunnel B," AEDC-DR-74-39, May 9, 1974.

TABLE 1. TEST CONDITIONS

Mach No. M	Total Pressure Po (psia)	Total Temperature To (°F)	Reynolds No. Re/ft
8	860	880	3.7×10^6
8	675	870	3.0×10^6
8	545	850	2.5×10^6
8	425	840	2.0×10^6
8	325	835	1.5×10^6
8	210	810	1.0×10^6

TABLE II.

TEST: ϕH4A

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: NOV. 12, 1973

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES αs	M	Po	To	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) Rex/10⁶	Room	Temp.	Runs (PART 1)	TEST RUN NUMBERS
001	$B_1C_1F_5M_4V_1W_{10}3$	25		+5	8	860	880		3.7		1		
002		30		0		↓	↓		↓		2		
003		35		-5		↓	↓		↓		3		
004		25		+5		675	870		3.0		4		
005		30		0		↓	↓		↓		5		
006		35		-5		↓	↓		↓		6		
007		25		+5		545	850		2.5		7		
008		30		0		↓	↓		↓		8		
009		35		-5		↓	↓		↓		9		
010		25		+5		425	840		2.0		10		
011		30		0		↓	↓		↓		11		
012		35		-5		↓	↓		↓		12		
013		25		+5		325	835		1.5		13		
014		30		0		↓	↓		↓		14		
015		35		-5		↓	↓		↓		15		
016		25		+5		210	810		1.0		16		
017		30		0		↓	↓		↓		17		
018	↓	35		-5	↓	↓	↓		↓		18		

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES

αs = Sector Angle

COEFFICENTS

IDVAR (1) IDVAR (2) NDV

TABLE II. - Continued.

TEST: OH4A

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: DEC. 5, 1973

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION δs	CONTROL DEFLECTION M	CONTROL DEFLECTION Po	CONTROL DEFLECTION To	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) Rex 10⁶	Room Temp Runs (Part 2)	TEST RUN NUMBERS
032	$B_1 C_1 F_5 M_4 V_1 W_{103}$	30		0	8	860	880		3.7	32	
033		35		+5						33	
034		25		-5						34	
										Cold Wall Runs (Part 2)	
035		30		0						35	
036		35		+5						36	
037		25		-5						37	Excessive Frost
038		25		-5		↓	↓		↓	38	Repeat 37
039		30		0		675	870		3.0	39	
040		35		+5						40	
041		25		-5		↓	↓		↓	41	
042		30		0		545	850		2.5	42	Slight Frost
043		35		+5						43	
044		25		-5						44	
045		30		0		↓	↓		↓	45	↓
046		30		0		425	840		2.0	46	
047		35		+5						47	
048	↓	25		-5	↓	↓	↓		↓	48	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICENTS

α OR β SCHEDULES

IDVAR (1) IDVAR (2) NDV

TABLE II. - Concluded.

TEST: OH4A

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: DEC. 5, 1973

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION δ_s	CONTROL DEFLECTION M	CONTROL DEFLECTION P_0	CONTROL DEFLECTION T_0	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) $Re \times 10^6$	TEST RUN NUMBERS
049	$B_1C_1F_5M_4V_1W_{103}$	30		0	8	325	835		1.5	Cold Wall Runs (Part 2)
050		35		+5						49
051		25		-5		↓	↓		↓	50
052		30		0		210	810		1.0	51
053		35		+5						52
054		25		-5		↓	↓		↓	53
055		30		0		545	850		2.5	54
056		35		+5						55 Repeat 11 & 14
057	↓	25		-5	↓	↓	↓		↓	56 Repeat 12
										57 Repeat 13

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES | COEFFICENTS | IDVAR (1) | IDVAR (2) | NDV

TABLE III. MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B_{17}

GENERAL DESCRIPTION : Fuselage, 3 configuration, lightweight Orbiter per Rockwell Lines VL70-000139.

MODEL SCALE: 0.0175

DRAWING NUMBER : VL70-000139

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length In.	1290.3	22.58025
Max Width In.	267.6	4.6830
Max Depth - In.	244.5	4.27875
Fineness Ratio	4.82175	4.82175
Area Ft^2		
Max. Cross-Sectional	386.67	0.11842
Planform		
Wetted		
Base		

TABLE III. MODEL DIMENSIONAL DATA (CONT'D)

MODEL COMPONENT : CANOPY - C_7

GENERAL DESCRIPTION : Configuration 3 per Rockwell Lines VL70-000139.

MODEL SCALE: 0.0175

DRAWING NUMBER : VL70-000139

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o=433 to X_o=578) - In. F.S.	145	2.538
Max Width		
Max Depth		
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III. MODEL DIMENSIONAL DATA (CONT'D)

MODEL COMPONENT : BODY FLAP - F_5

GENERAL DESCRIPTION : 3 Configuration per Rockwell Lines VL70-000139

MODEL SCALE: 0.0175

DRAWING NUMBER : VL70-000139

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length - In.	84.70	1.48225
Max Width - In.	267.6	4.6830
Max Depth		
Fineness Ratio		
Area Ft^2		
Max. Cross-Sectional		
Planform	142.5195	0.04365
Wetted		
Base	38.0958	0.01167

TABLE III. MODEL DIMENSIONAL DATA (CONT'D)

MODEL COMPONENT : OMS POD- M_4

GENERAL DESCRIPTION : Configuration 3 per Rockwell Lines VL70-000139 Orbital maneuvering system pods located on the orbiter aft fuselage.

MODEL SCALE: 0.0175

DRAWING NUMBER : VL70-000139

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length - In.	346.0	6.0550
Max Width In.	108.0	1.890
Max Depth In.	113.0	1.992
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

Centerline of OMS Pod:

WP - 463.9 INFS; WP 400 + 63.9 = 463.9
BP - 80.0 INFS
Length 1214.0 to 1560.0 = 346.0 INFS

NOTE: M_4 identical to M_3 of 2A configuration, except intersection to body.

TABLE III DIMENSIONAL DATA (CONT'D)

MODEL COMPONENT: VERTICAL - V_7

GENERAL DESCRIPTION: Centerline vertical tail, doublewedge airfoil with rounded leading edge.

NOTE: Same as V_5, but with manipulator housing removed.

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-000139, VL70-000095

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) Ft^2		
Planform	425.92	0.13044
Span (Theo) In	315.72	5.52510
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	0.404	0.404
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	26.249	26.249
0.25 Element Line	41.130	41.130
Chords:		
Root (Theo) WP	268.50	4.69875
Tip (Theo) WP	108.47	1.89822
MAC	199.81	3.49667
Fus. Sta. of .25 MAC	1463.50	25.61125
W. P. of .25 MAC	635.522	11.12164
B. L. of .25 MAC	0.00	0.00
Airfoil Section		
Leading Wedge Angle Deg	10.000	10.000
Trailing Wedge Angle Deg	14.920	14.920
Leading Edge Radius	2.0	0.0350
Void Area	13.17	0.00403
Blanketed Area	0.00	0.00

TABLE III DIMENSIONAL DATA - Concluded.

MODEL COMPONENT: WING-W_{103}

GENERAL DESCRIPTION: Configuration 3 orbiter per Lines VL70-000139.

NOTE: Same planform as W_{87} except dihedral at Trailing Edge.

MODEL SCALE: 0.0175

TEST NO. DWG. NO. VL70-000139

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft^2		
Planform	2690.00	0.82381
Span (Theo In.	936.68	16.39190
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees	3.500	3.500
Incidence Angle, degrees	3.000	3.000
Aerodynamic Twist, degrees	+ 3.000	+ 3.000
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	- 10.24	- 10.24
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.0.0.	689.24	12.06170
Tip, (Theo) B.P.	137.85	2.41238
MAC	474.81	8.30918
Fus. Sta. of .25 MAC	1136.89	19.89558
W.P. of .25 MAC	299.20	5.2360
B.L. of .25 MAC	182.13	3.18728
EXPOSED DATA		
Area (Theo) Ft^2	1752.29	0.53664
Span, (Theo) In. BP108	720.68	12.61190
Aspect Ratio	2.058	2.058
Taper Ratio	0.2451	0.2451
Chords		
Root BP108	462.40	9.8420
Tip 1.00 $\frac{b}{2}$	137.85	2.41238
MAC	393.03	6.87802
Fus. Sta. of .25 MAC	1185.31	20.74292
W.P. of .25 MAC	300.20	5.25350
B.L. of .25 MAC	251.76	2.51580
Airfoil Section (Rockwell Mod NASA) XXXX-64		
Root $\frac{b}{2}$ =	0.10	0.10
Tip $\frac{b}{2}$ =	0.12	0.12
Data for (1) of (2) Sides		
Leading Edge Cuff		
Planform Area Ft^2	120.33	0.03685
Leading Edge Intersects Fus M. L. @ Sta	560.0	9.800
Leading Edge Intersects Wing @ Sta	1035.0	18.11250

TABLE IV. THERMOCOUPLE GAUGE COORDINATES*

FUSELAGE

Gauge No.	X/L	X	Y	ø
1	.005	.113	0	
2	.020	.452	0	
3	.040	.903	0	
4	.012	.282	0	
6	.060	1.355	0	
7	.080	1.806	0	
8	.100	2.258	0	
10	.150	3.387	0	
11	.150	3.387	-	20°
12	.150	3.387	-	30°
13	.150	3.387	-	45.5°
16	.200	4.516	0	
17	.200	4.516	.875	
19	.225	5.081	0	
20	.250	5.645	0	
22	.275	6.210	0	
23	.300	6.774	0	
24	.300	6.774	1.312	
25	.300	6.774	-	40°
26	.300	6.774	-	45°
29	.325	7.339	0	
30	.350	7.898	0	
31	.400	9.032	0	
32	.400	9.032	.875	
33	.450	10.161	0	
34	.500	11.290	0	
35	.500	11.290	.875	
37	.550	12.419	0	
38	.600	13.548	0	
39	.600	13.548	.875	
40	.650	14.677	0	
41	.700	15.806	0	
43	.750	16.935	0	
44	.800	18.064	0	
45	.800	18.064	.875	
46	.850	19.193	0	
47	.900	20.322	0	
48	.900	20.322	.875	
49	.950	21.451	0	
50	1.000	22.580	0	
51	1.000	22.580	1.750	

WING

Gauge No.	X/C	X	Y/b/2	Y
52	.082	9.032	0.25	2.049
53	.302	11.290		
54	.447	13.548		
55	.591	15.806		
56	.736	18.064		
57	.881	20.322		
58	.050	13.548	0.40	3.278
59	.100	14.022		
60	.200	14.910		
61	.300	15.806		
62	.560	18.064		
63	.700	19.307		
64	.900	21.066		
65	.176	15.806	0.50	4.098
66	.484	18.064		
67	.900	21.076		
68	.100	15.995	0.60	4.918
69	.200	16.625		
70	.430	18.064		
71	.600	19.145		
72	.800	20.405		
73	.900	21.035		
74	.100	17.084	0.75	6.147
75	.300	18.064		
76	.500	19.022		
77	.700	19.992	0.75	6.147
78	.900	20.962		
79	.100	17.801	0.85	6.967
80	.300	18.578		
81	.500	19.355		
82	.700	19.618	0.50	4.098
83	.100	18.792	0.95	7.786
84	.500	19.762		
85	.900	20.871		

* See Figure 1 for definition of X, Y, & ø

TABLE V. LOCAL MODEL SURFACE ANGLES

GAUGE NO.	θ (DEGREES)	GAUGE NO.	θ (DEGREES)
1	52.25	49	-3.5
2	20.5	50	-4.5
3	13.5	51	-4.5
4	27.5	52	5.35
6	10.0	53	2.5
7	7.25	54	2.65
8	5.50	55	2.25
10	3.25	56	0
11	3.25	57	-0.75
12	3.25	58	9.3
16	2.0	59	6.7
17	2.0	60	5.65
19	1.5	61	4.65
20	1.25	62	2.85
22	1.0	63	1.4
23	1.0	64	-4.75
24	1.0	65	4.55
25	1.0	66	5.0
26	1.0	67	-5.3
29	1.0	68	4.95
30	1.0	69	4.8
31	1.0	70	5.4
32	1.0	71	3.5
33	1.0	72	-1.55
34	1.0	73	-5.1
35	1.0	74	5.3
37	1.0	75	5.25
38	1.0	76	4.7
39	1.0	77	1.5
40	1.0	78	-4.8
41	1.0	79	5.6
43	1.0	80	5.35
44	1.0	81	4.6
45	1.0	82	1.85
46	-0.6	83	5.8
47	-2.0	84	4.4
48	-2.0	85	-4.3

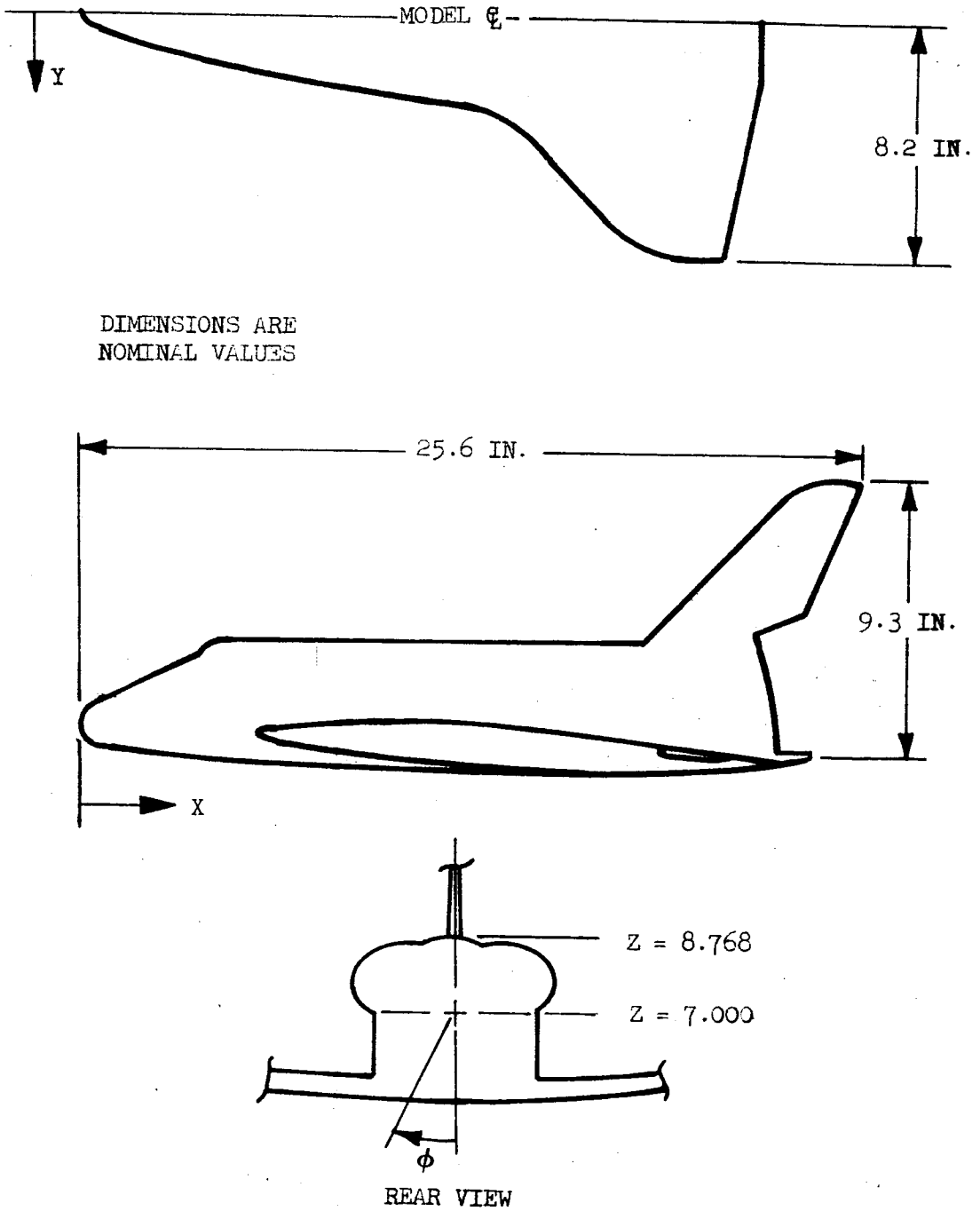

Figure 1. - Model 29-0 Nominal Dimensions.

Note: Shown 10 x scale

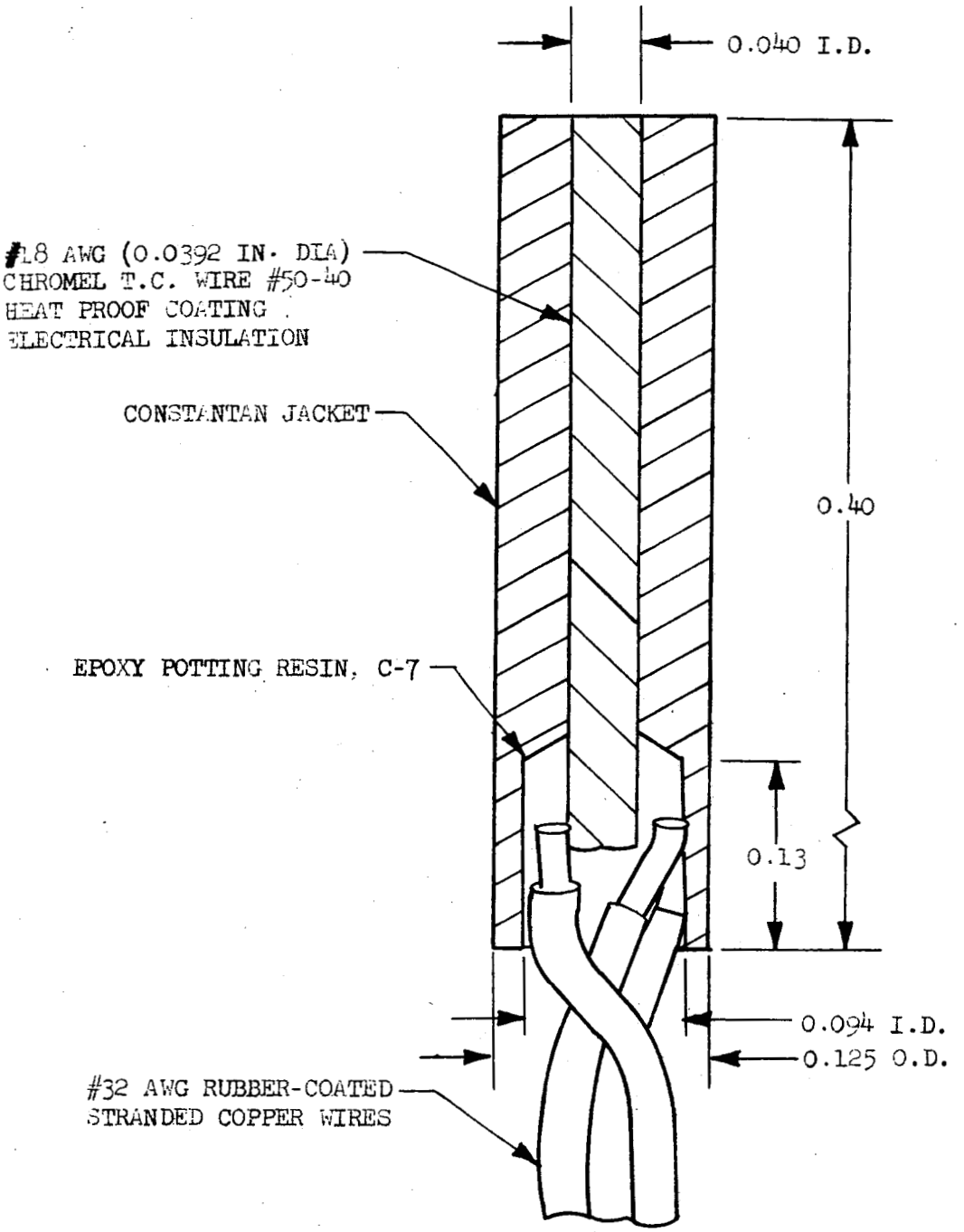

Figure 2. - Chromel - Constantan Coaxial Surface Thermocouple.

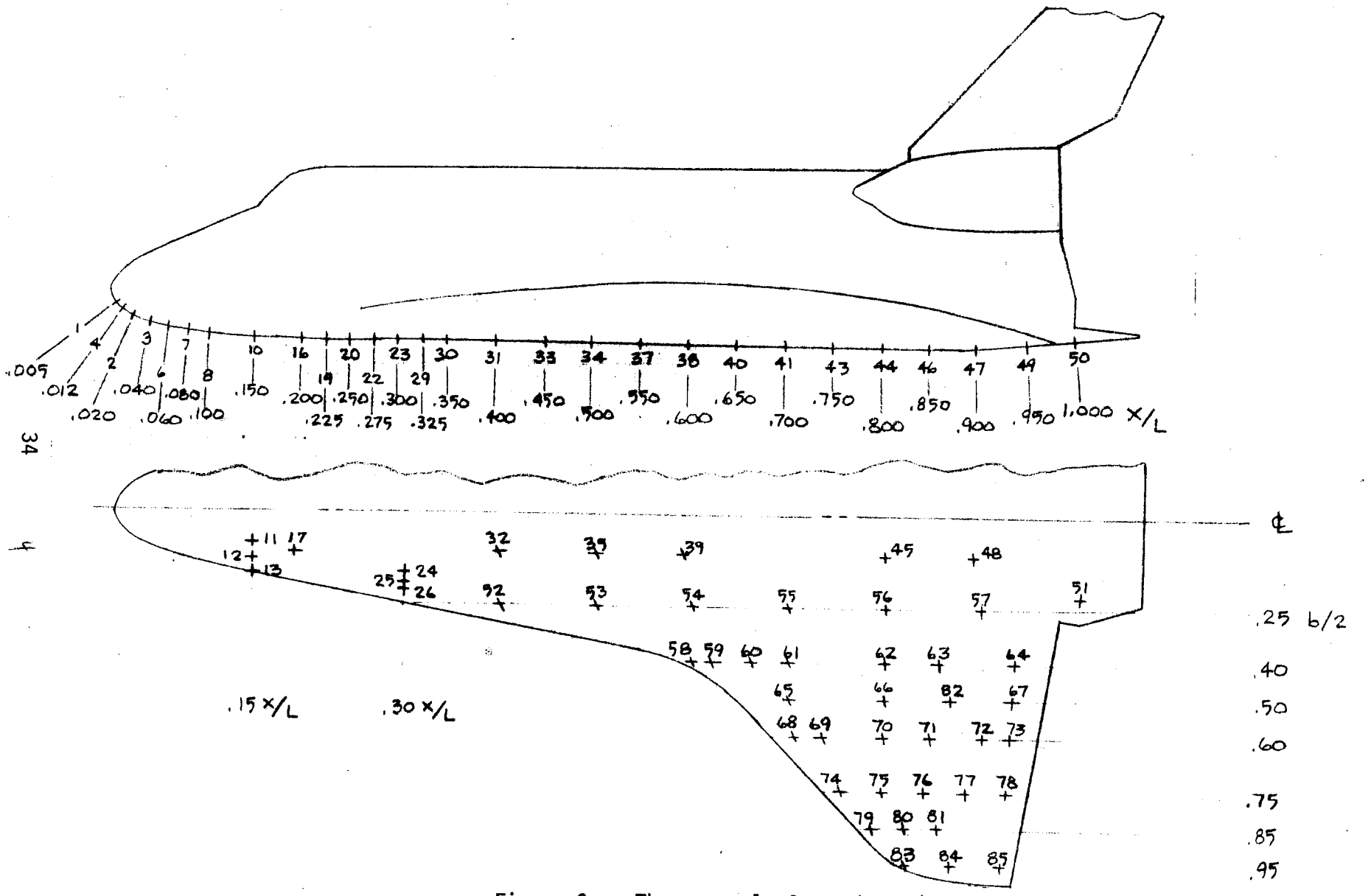

Figure 3. - Thermocouple Gauge Locations.

APPENDIX

TABULATED SOURCE DATA

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL A
VA352-21HA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
1	1		8.00	861.8	1351	24.88	5.12	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.9	.086	3.955	3879	7.564E-05	7.883E-08	3.722E 06	4.917E-02	2.104E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
(1)	541.1	3.787	4.674E-03	.0951	5.610E-03	.1141	4.150E-03	.0844	.0050		0
4	577.6	16.964	2.193E-03	.4460	2.657E-02	.5404	2.269E-02	.4616	.0120		0
2	541.4	11.654	1.476E-02	.3001	1.780E-02	.3620	1.591E-02	.3235	.0200		0
3	549.4	6.957	8.676E-03	.1765	1.043E-02	.2122	9.716E-03	.1976	.0400		0
6	543.8	4.970	6.155E-03	.1252	7.392E-03	.1503	7.017E-03	.1427	.0600		0
7	541.3	3.941	4.865E-03	.0990	5.840E-03	.1188	5.623E-03	.1144	.0800		0
8	539.8	3.388	4.175E-03	.0849	5.009E-03	.1019	4.866E-03	.0990	.1000		0
(10)	537.0	2.391	2.937E-03	.0597	3.521E-03	.0716	3.458E-03	.0703	.1500	0	0
12	543.3	4.586	5.676E-03	.1154	6.816E-03	.1386	6.693E-03	.1361	.1500	30.0000	
13	538.1	3.132	3.852E-03	.0783	4.619E-03	.0939	4.537E-03	.0923	.1500	45.5000	
(16)	536.7	2.175	2.670E-03	.0543	3.201E-03	.0651	3.163E-03	.0643	.2000		0
17	539.4	3.217	3.962E-03	.0806	4.754E-03	.0967	4.696E-03	.0955	.2000		.1070
19	536.4	2.089	2.564E-03	.0522	3.074E-03	.0625	3.033E-03	.0617	.2250		0
(20)	536.6	1.965	2.413E-03	.0491	2.892E-03	.0588	2.868E-03	.0583	.2500		0
22	536.3	1.871	2.296E-03	.0467	2.753E-03	.0560	2.732E-03	.0556	.2750		0
23	536.3	1.849	2.269E-03	.0462	2.720E-03	.0553	2.700E-03	.0549	.3000	0	0
24	540.0	3.020	3.722E-03	.0757	4.466E-03	.0908	4.433E-03	.0902	.3000	34.0000	
25	540.7	3.273	4.038E-03	.0821	4.846E-03	.0986	4.810E-03	.0978	.3000	40.0000	
26	541.0	3.419	4.220E-03	.0858	5.065E-03	.1030	5.027E-03	.1022	.3000	45.0000	
(29)	536.7	1.800	2.210E-03	.0450	2.650E-03	.0539	2.630E-03	.0535	.3250		0
(30)	537.1	1.799	2.209E-03	.0449	2.649E-03	.0539	2.629E-03	.0535	.3500		0
(31)	536.9	1.635	2.008E-03	.0408	2.408E-03	.0490	2.390E-03	.0486	.4000		0
32	538.1	2.078	2.556E-03	.0520	3.065E-03	.0623	3.042E-03	.0619	.4000		.1070
(33)	537.0	1.589	1.952E-03	.0397	2.340E-03	.0476	2.323E-03	.0472	.4500		0
(34)	536.6	1.553	1.906E-03	.0388	2.285E-03	.0465	2.269E-03	.0461	.5000		0
35	536.8	1.709	2.098E-03	.0427	2.515E-03	.0512	2.496E-03	.0508	.5000		.1070
(37)	536.8	1.549	1.902E-03	.0387	2.280E-03	.0464	2.263E-03	.0460	.5500		0
(38)	537.2	1.561	1.918E-03	.0390	2.300E-03	.0468	2.283E-03	.0464	.6000		0
39	537.6	1.664	2.045E-03	.0416	2.452E-03	.0499	2.434E-03	.0495	.6000		.1070
(40)	537.4	1.580	1.942E-03	.0395	2.328E-03	.0474	2.311E-03	.0470	.6500		0
41	538.4	1.665	2.049E-03	.0417	2.457E-03	.0500	2.439E-03	.0496	.7000		0
(43)	538.6	1.877	2.309E-03	.0470	2.770E-03	.0563	2.749E-03	.0559	.7500		0
(44)	540.7	2.499	3.083E-03	.0627	3.700E-03	.0753	3.672E-03	.0747	.8000		0
45	541.3	2.697	3.330E-03	.0677	3.997E-03	.0813	3.967E-03	.0807	.8000		.1070
46	543.1	3.316	4.104E-03	.0835	4.928E-03	.1002	4.926E-03	.1002	.8500		0
47	542.9	3.412	4.221E-03	.0859	5.069E-03	.1031	5.099E-03	.1037	.9000		0
48	543.4	3.686	4.563E-03	.0928	5.480E-03	.1115	5.513E-03	.1121	.9000		.1070
49	542.6	3.398	4.202E-03	.0855	5.045E-03	.1026	5.104E-03	.1039	.9500		0
(50)	543.9	3.785	4.684E-03	.0954	5.631E-03	.1145	5.726E-03	.1164	1.0000		0
51	547.4	4.871	6.060E-03	.1233	7.285E-03	.1482	7.408E-03	.1507	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
1	1		8.00	861.8	1351	24.88	5.12	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.9	.088	3.955	3879	7.564E-05	7.883E-08	3.722E 06	4.917E-02	2.104E-02	1

GAGE	Tw	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(Taw)	H(Taw)/HREF	X/C	2Y/B
52	541.6	3.198	3.950E-03	.0803	4.742E-03	.0964	4.609E-03	.0937	.0820	.2500
53	541.1	2.674	3.301E-03	.0671	3.961E-03	.0806	3.904E-03	.0794	.3020	.2500
54	538.6	1.910	2.351E-03	.0478	2.820E-03	.0573	2.777E-03	.0565	.4470	.2500
55	538.8	1.894	2.332E-03	.0474	2.797E-03	.0569	2.760E-03	.0561	.5910	.2500
56	545.7	4.549	5.648E-03	.1149	6.786E-03	.1380	6.765E-03	.1376	.7360	.2500
57	548.6	5.565	6.934E-03	.1410	8.337E-03	.1696	8.341E-03	.1696	.8810	.2500
58	557.1	7.598	9.569E-03	.1946	1.153E-02	.2345	1.098E-02	.2232	.0500	.4000
59	550.6	6.322	6.647E-03	.1352	7.997E-03	.1626	7.718E-03	.1570	.1000	.4000
60	545.2	3.671	4.554E-03	.0926	5.471E-03	.1113	5.310E-03	.1080	.2000	.4000
61	544.7	3.366	4.173E-03	.0849	5.013E-03	.1020	4.889E-03	.0994	.3000	.4000
62	548.4	4.803	5.983E-03	.1217	7.194E-03	.1463	7.077E-03	.1439	.5600	.4000
63	549.3	5.890	7.345E-03	.1494	8.834E-03	.1797	8.750E-03	.1780	.7000	.4000
64	545.3	4.594	5.700E-03	.1159	6.848E-03	.1393	6.971E-03	.1418	.9000	.4000
65	552.1	5.094	6.325E-03	.1286	7.612E-03	.1548	7.425E-03	.1510	.1760	.5000
66	550.8	5.143	6.426E-03	.1307	7.731E-03	.1572	7.525E-03	.1530	.4840	.5000
82	553.3	8.669	8.359E-03	.1700	1.006E-02	.2046	9.945E-03	.2023	.7000	.5000
67	545.5	4.457	5.532E-03	.1125	6.647E-03	.1352	6.781E-03	.1379	.9000	.5000
68	547.8	4.252	5.292E-03	.1076	6.362E-03	.1294	6.195E-03	.1260	.1000	.6000
69	542.8	2.182	2.698E-03	.0549	3.240E-03	.0659	3.158E-03	.0642	.2000	.6000
70	556.1	7.058	8.877E-03	.1805	1.069E-02	.2175	1.039E-02	.2112	.4300	.6000
71	568.5	11.050	1.417E-02	.2871	1.706E-02	.3471	1.672E-02	.3401	.6000	.6000
72	553.0	8.474	8.111E-03	.1650	9.764E-03	.1986	9.803E-03	.1994	.8000	.6000
73	548.3	8.361	6.676E-03	.1358	8.027E-03	.1633	8.183E-03	.1664	.9000	.6000
74	566.8	11.635	1.483E-02	.3017	1.792E-02	.3645	1.740E-02	.3540	.1000	.7500
75	574.0	13.075	1.682E-02	.3421	2.036E-02	.4141	1.978E-02	.4022	.3000	.7500
76	565.7	10.596	1.349E-02	.2743	1.629E-02	.3313	1.587E-02	.3228	.5000	.7500
77	558.6	9.074	1.145E-02	.2328	1.380E-02	.2807	1.366E-02	.2778	.7000	.7500
78	557.9	8.066	1.017E-02	.2068	1.226E-02	.2493	1.248E-02	.2538	.9000	.7500
79	561.1	9.891	1.252E-02	.2546	1.510E-02	.3071	1.465E-02	.2979	.1000	.8500
80	557.6	7.885	9.935E-03	.2021	1.197E-02	.2435	1.163E-02	.2366	.3000	.8500
81	567.4	11.198	1.429E-02	.2905	1.726E-02	.3511	1.682E-02	.3422	.5000	.8500
83	562.3	9.140	1.159E-02	.2356	1.398E-02	.2843	1.355E-02	.2755	.1000	.9500
84	547.7	4.698	5.848E-03	.1189	7.030E-03	.1430	6.864E-03	.1396	.5000	.9500
85	555.4	7.105	8.927E-03	.1816	1.075E-02	.2187	1.093E-02	.2222	.9000	.9500

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREHEND	ROLL MODEL	YAW
2	1		8.00	860.5	1350	30.04	-.04	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.8	.088	3.949	3876	7.562E-05	7.873E-08	3.723E 06	4.912E-02	2.104E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	499.4	4.626	5.442E-03	.1108	6.469E-03	.1317	4.709E-03	.0959	.0050		0
4	531.8	18.900	2.311E-02	.4705	2.768E-02	.5635	2.316E-02	.4714	.0120		0
2	513.2	13.255	1.585E-02	.3227	1.890E-02	.3847	1.653E-02	.3365	.0200		0
3	500.4	8.428	9.926E-03	.2021	1.180E-02	.2403	1.075E-02	.2188	.0400		0
6	494.5	6.342	7.418E-03	.1510	8.808E-03	.1793	8.175E-03	.1664	.0600		0
7	492.3	5.177	6.040E-03	.1230	7.169E-03	.1459	6.748E-03	.1374	.0800		0
8	492.0	4.636	5.173E-03	.1053	6.139E-03	.1250	5.829E-03	.1187	.1000		0
10	493.3	3.256	3.802E-03	.0774	4.514E-03	.0919	4.333E-03	.0882	.1500	0	0
12	502.6	5.531	6.531E-03	.1330	7.769E-03	.1582	7.453E-03	.1517	.1500	30.0000	
13	496.1	3.427	4.015E-03	.0817	4.769E-03	.0971	4.578E-03	.0932	.1500	45.5000	
16	496.7	2.989	3.505E-03	.0714	4.164E-03	.0848	4.020E-03	.0818	.2000		0
17	501.6	3.817	4.501E-03	.0916	5.353E-03	.1090	5.167E-03	.1052	.2000		.1070
19	496.7	2.845	3.336E-03	.0679	3.963E-03	.0807	3.822E-03	.0778	.2250		0
20	495.2	2.837	3.320E-03	.0676	3.943E-03	.0803	3.821E-03	.0778	.2500		0
22	495.6	2.744	3.214E-03	.0654	3.817E-03	.0777	3.703E-03	.0754	.2750		0
23	497.7	2.700	3.170E-03	.0645	3.766E-03	.0767	3.653E-03	.0744	.3000	0	0
24	503.3	3.705	4.378E-03	.0891	5.209E-03	.1060	5.051E-03	.1028	.3000	34.0000	
25	505.0	3.957	4.685E-03	.0954	5.576E-03	.1135	5.408E-03	.1101	.3000	40.0000	
26	505.9	3.984	4.723E-03	.0962	5.622E-03	.1145	5.452E-03	.1110	.3000	45.0000	
29	501.0	2.584	3.045E-03	.0620	3.621E-03	.0737	3.512E-03	.0715	.3250		0
30	503.2	2.576	3.044E-03	.0620	3.622E-03	.0737	3.512E-03	.0715	.3500		0
31	506.6	2.350	2.788E-03	.0568	3.320E-03	.0676	3.219E-03	.0655	.4000		0
32	510.7	2.833	3.377E-03	.0688	4.025E-03	.0819	3.902E-03	.0794	.4000		.1070
33	511.0	2.293	2.735E-03	.0557	3.259E-03	.0664	3.160E-03	.0643	.4500		0
34	514.3	2.351	2.814E-03	.0573	3.357E-03	.0683	3.254E-03	.0662	.5000		0
35	516.8	2.350	2.822E-03	.0575	3.368E-03	.0686	3.264E-03	.0665	.5000		.1070
37	518.6	2.360	2.840E-03	.0578	3.391E-03	.0690	3.286E-03	.0669	.5500		0
38	522.9	2.646	3.202E-03	.0652	3.826E-03	.0779	3.707E-03	.0755	.6000		0
39	525.2	2.614	3.171E-03	.0645	3.791E-03	.0772	3.673E-03	.0748	.6000		.1070
40	526.9	3.020	3.672E-03	.0748	4.392E-03	.0894	4.255E-03	.0866	.6500		0
41	531.9	3.668	4.487E-03	.0913	5.374E-03	.1094	5.205E-03	.1060	.7000		0
43	535.6	4.343	5.336E-03	.1086	6.396E-03	.1302	6.194E-03	.1261	.7500		0
44	542.9	6.001	7.440E-03	.1515	8.935E-03	.1819	8.650E-03	.1761	.8000		0
45	543.3	5.535	6.865E-03	.1398	8.245E-03	.1679	7.982E-03	.1625	.8000		.1070
46	547.7	7.092	8.845E-03	.1801	1.064E-02	.2165	1.038E-02	.2112	.8500		0
47	546.4	6.734	8.385E-03	.1707	1.008E-02	.2052	9.900E-03	.2016	.9000		0
48	546.3	6.350	7.906E-03	.1609	9.502E-03	.1934	9.334E-03	.1900	.9000		.1070
49	543.8	6.265	7.776E-03	.1583	9.340E-03	.1901	9.241E-03	.1881	.9500		0
50	542.7	6.356	7.878E-03	.1604	9.460E-03	.1926	9.403E-03	.1914	1.0000		0
51	545.3	6.531	8.121E-03	.1653	9.758E-03	.1987	9.699E-03	.1975	1.0000		.2140

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
2	1		8.00	860.5	1350	30.04	-.04	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.8	.088	3.949	3876	7.562E-05	7.873E-08	3.723E 06	4.912E-02	2.104E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X'/C	2Y/B
52	515.8	3.590	4.306E-03	.0877	5.138E-03	.1046	4.874E-03	.0992	.0820	.2500
53	522.3	3.260	3.941E-03	.0802	4.709E-03	.0959	4.529E-03	.0922	.3020	.2500
54	526.6	2.528	3.072E-03	.0625	3.675E-03	.0748	3.532E-03	.0719	.4470	.2500
55	533.0	2.850	3.490E-03	.0711	4.181E-03	.0851	4.025E-03	.0819	.5910	.2500
56	546.2	5.991	7.457E-03	.1518	8.963E-03	.1825	8.719E-03	.1775	.7360	.2500
57	549.9	7.215	9.022E-03	.1837	1.085E-02	.2210	1.060E-02	.2157	.8810	.2500
58	543.3	7.320	9.079E-03	.1848	1.090E-02	.2220	1.011E-02	.2057	.0500	.4000
59	539.1	5.457	6.734E-03	.1371	8.080E-03	.1645	7.597E-03	.1547	.1000	.4000
60	536.5	3.961	4.871E-03	.0992	5.841E-03	.1189	5.524E-03	.1125	.2000	.4000
61	539.1	3.801	4.690E-03	.0955	5.627E-03	.1146	5.348E-03	.1089	.3000	.4000
62	547.5	5.151	6.422E-03	.1307	7.722E-03	.1572	7.403E-03	.1507	.5600	.4000
63	548.9	6.516	8.138E-03	.1657	9.788E-03	.1993	9.454E-03	.1925	.7000	.4000
64	544.2	5.534	6.872E-03	.1399	8.255E-03	.1681	8.215E-03	.1672	.9000	.4000
65	546.7	5.449	6.788E-03	.1382	8.160E-03	.1661	7.755E-03	.1579	.1760	.5000
66	546.0	4.306	5.359E-03	.1091	6.440E-03	.1311	6.107E-03	.1243	.4840	.5000
82	548.4	5.627	7.024E-03	.1430	8.446E-03	.1720	8.139E-03	.1657	.7000	.5000
67	542.0	4.599	5.695E-03	.1159	6.838E-03	.1392	6.822E-03	.1389	.9000	.5000
68	548.1	5.896	7.357E-03	.1498	8.847E-03	.1801	8.390E-03	.1708	.1000	.6000
69	548.4	4.991	6.230E-03	.1268	7.492E-03	.1525	7.110E-03	.1448	.2000	.6000
70	549.6	4.845	6.057E-03	.1233	7.286E-03	.1483	6.892E-03	.1403	.4300	.6000
71	552.8	6.201	7.782E-03	.1584	9.369E-03	.1907	8.950E-03	.1822	.6000	.6000
72	545.5	4.373	5.439E-03	.1107	6.537E-03	.1331	6.407E-03	.1304	.8000	.6000
73	542.8	4.205	5.212E-03	.1061	6.259E-03	.1274	6.238E-03	.1270	.9000	.6000
74	593.7	20.213	2.674E-02	.5445	3.256E-02	.6628	3.070E-02	.6249	.1000	.7500
75	551.2	4.672	5.852E-03	.1191	7.043E-03	.1434	6.667E-03	.1357	.3000	.7500
76	551.9	4.750	5.955E-03	.1212	7.168E-03	.1459	6.804E-03	.1385	.5000	.7500
77	546.9	5.441	6.779E-03	.1380	8.149E-03	.1659	7.867E-03	.1602	.7000	.7500
78	558.7	8.186	1.035E-02	.2107	1.248E-02	.2541	1.242E-02	.2529	.9000	.7500
79	576.6	14.625	1.892E-02	.3852	2.292E-02	.4667	2.161E-02	.4400	.1000	.8500
80	583.4	15.786	2.060E-02	.4195	2.501E-02	.5092	2.360E-02	.4804	.3000	.8500
81	585.8	16.876	2.210E-02	.4499	2.684E-02	.5464	2.542E-02	.5176	.5000	.8500
83	565.0	9.536	1.216E-02	.2475	1.468E-02	.2989	1.384E-02	.2818	.1000	.9500
84	567.8	10.201	1.305E-02	.2657	1.577E-02	.3211	1.498E-02	.3049	.5000	.9500
85	565.5	9.980	1.273E-02	.2591	1.538E-02	.3130	1.527E-02	.3108	.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
3	1		8.00	861.0	1346	34.95	-4.95	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.5	.088	3.951	3871	7.586E-05	7.853E-08	3.740E 06	4.911E-02	2.100E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	ZY/B
1	518.9	5.346	6.463E-03	.1316	7.720E-03	.1572	5.407E-03	.1101	.0050		0
4	566.3	19.023	2.439E-02	.4967	2.948E-02	.6003	2.370E-02	.4826	.0120		0
2	549.6	13.708	1.721E-02	.3505	2.071E-02	.4218	1.747E-02	.3556	.0200		0
3	536.6	9.024	1.115E-02	.2270	1.337E-02	.2723	1.178E-02	.2399	.0400		0
6	529.9	6.969	8.540E-03	.1739	1.023E-02	.2082	9.203E-03	.1874	.0600		0
7	526.1	5.837	7.119E-03	.1449	8.517E-03	.1734	7.786E-03	.1585	.0800		0
8	522.6	5.056	6.140E-03	.1250	7.340E-03	.1494	6.777E-03	.1380	.1000		0
10	514.6	3.898	4.689E-03	.0955	5.595E-03	.1139	5.231E-03	.1065	.1500	0	0
12	520.0	6.269	7.589E-03	.1545	9.066E-03	.1846	8.473E-03	.1725	.1500	30.0000	
13	510.9	3.534	4.232E-03	.0862	5.046E-03	.1027	4.720E-03	.0961	.1500	45.5000	
16	511.3	3.796	4.548E-03	.0926	5.422E-03	.1104	5.105E-03	.1039	.2000		0
17	513.1	4.605	5.528E-03	.1126	6.594E-03	.1343	6.206E-03	.1264	.2000		.1070
19	509.4	3.676	4.394E-03	.0895	5.237E-03	.1066	4.925E-03	.1003	.2250		0
20	508.8	3.562	4.234E-03	.0862	5.041E-03	.1026	4.766E-03	.0970	.2500		0
22	505.1	3.414	4.060E-03	.0827	4.833E-03	.0984	4.575E-03	.0932	.2750		0
23	504.6	3.288	3.907E-03	.0796	4.651E-03	.0947	4.403E-03	.0897	.3000	0	0
24	509.4	4.354	5.204E-03	.1060	6.202E-03	.1263	5.869E-03	.1195	.3000	34.0000	
25	510.0	4.731	5.658E-03	.1152	6.744E-03	.1373	6.382E-03	.1299	.3000	40.0000	
26	509.7	4.702	5.622E-03	.1145	6.700E-03	.1364	6.340E-03	.1291	.3000	45.0000	
29	506.3	3.124	3.720E-03	.0757	4.430E-03	.0902	4.193E-03	.0854	.3250		0
30	506.9	3.078	3.668E-03	.0747	4.368E-03	.0889	4.135E-03	.0842	.3500		0
31	508.8	3.046	3.639E-03	.0741	4.336E-03	.0883	4.103E-03	.0835	.4000		0
32	511.4	3.236	3.878E-03	.0790	4.623E-03	.0941	4.374E-03	.0891	.4000		.1070
33	512.5	3.128	3.753E-03	.0764	4.476E-03	.0911	4.234E-03	.0862	.4500		0
34	514.6	3.241	3.898E-03	.0794	4.651E-03	.0947	4.400E-03	.0896	.5000		0
35	516.3	3.017	3.636E-03	.0740	4.340E-03	.0884	4.105E-03	.0836	.5000		.1070
37	519.6	3.519	4.258E-03	.0867	5.087E-03	.1036	4.810E-03	.0979	.5500		0
38	525.4	4.180	5.093E-03	.1037	6.092E-03	.1240	5.758E-03	.1172	.6000		0
39	527.4	4.191	5.120E-03	.1042	6.127E-03	.1248	5.790E-03	.1179	.6000		.1070
40	531.5	5.120	6.286E-03	.1280	7.530E-03	.1533	7.114E-03	.1448	.6500		0
41	540.8	6.612	8.212E-03	.1672	9.861E-03	.2008	9.308E-03	.1895	.7000		0
43	546.4	7.369	9.215E-03	.1876	1.108E-02	.2256	1.045E-02	.2129	.7500		0
44	547.2	7.357	1.186E-02	.2415	1.430E-02	.2912	1.348E-02	.2745	.8000		0
45	558.6	9.589	1.218E-02	.2479	1.469E-02	.2991	1.384E-02	.2819	.8000		.1070
46	562.4	10.038	1.281E-02	.2608	1.547E-02	.3149	1.470E-02	.2993	.8500		0
47	559.6	8.753	1.113E-02	.2266	1.343E-02	.2734	1.286E-02	.2618	.9000		0
48	559.1	8.537	1.085E-02	.2209	1.309E-02	.2664	1.253E-02	.2552	.9000		.1070
49	556.7	7.974	1.010E-02	.2057	1.218E-02	.2480	1.176E-02	.2394	.9500		0
50	556.1	7.908	1.001E-02	.2038	1.207E-02	.2457	1.171E-02	.2384	1.0000		0
51	557.1	7.806	9.895E-03	.2015	1.193E-02	.2429	1.158E-02	.2357	1.0000		.2140

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
3	1		8.00	861.0	1346	34.95	-4.95	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.5	.088	3.551	4171	7.586E-05	7.853E-08	3.740E 06	4.911E-02	2.100E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	517.1	4.012	4.839E-03	.0985	5.778E-03	.1176	5.342E-03	.1088	.0820	.2500
53	522.7	3.649	4.432E-03	.0902	5.298E-03	.1079	4.970E-03	.1012	.3020	.2500
54	529.5	3.595	4.403E-03	.0896	5.272E-03	.1073	4.938E-03	.1005	.4470	.2500
55	544.1	6.043	7.535E-03	.1534	9.054E-03	.1844	8.488E-03	.1728	.5910	.2500
56	562.6	10.060	1.284E-02	.2614	1.550E-02	.3157	1.469E-02	.2990	.7360	.2500
57	562.2	9.166	1.169E-02	.2381	1.412E-02	.2875	1.343E-02	.2734	.8810	.2500
58	544.0	7.306	9.109E-03	.1855	1.095E-02	.2229	9.869E-03	.2009	.0500	.4000
59	541.6	6.073	7.549E-03	.1537	9.066E-03	.1846	8.297E-03	.1689	.1000	.4000
60	542.0	5.118	6.366E-03	.1296	7.646E-03	.1557	7.037E-03	.1433	.2000	.4000
61	547.0	5.710	7.147E-03	.1455	8.595E-03	.1750	7.950E-03	.1619	.3000	.4000
62	564.6	9.275	1.187E-02	.2417	1.434E-02	.2920	1.337E-02	.2723	.5600	.4000
63	564.8	9.770	1.250E-02	.2546	1.511E-02	.3076	1.420E-02	.2891	.7000	.4000
64	557.9	7.675	9.738E-03	.1983	1.174E-02	.2391	1.141E-02	.2323	.9000	.4000
65	552.7	6.393	8.057E-03	.1641	9.704E-03	.1976	8.975E-03	.1827	.1740	.5000
66	560.4	7.142	9.154E-03	.1864	1.105E-02	.2249	1.018E-02	.2073	.4840	.5000
67	556.6	7.064	8.948E-03	.1822	1.079E-02	.2196	1.051E-02	.2140	.7000	.5000
68	556.7	7.607	9.637E-03	.1962	1.162E-02	.2366	1.072E-02	.2182	.9000	.5000
69	557.8	6.511	8.261E-03	.1682	9.962E-03	.2028	9.196E-03	.1872	.1000	.6000
70	564.7	7.692	9.844E-03	.2004	1.189E-02	.2421	1.093E-02	.2226	.2000	.6000
71	561.1	6.470	8.242E-03	.1678	9.948E-03	.2026	9.246E-03	.1883	.4300	.6000
72	558.3	6.027	7.651E-03	.1558	9.227E-03	.1879	8.816E-03	.1795	.6000	.6000
73	555.6	5.947	7.524E-03	.1532	9.069E-03	.1847	8.826E-03	.1797	.8000	.6000
74	572.3	10.606	1.371E-02	.2791	1.660E-02	.3379	1.525E-02	.3105	.9000	.6000
75	560.1	5.461	6.948E-03	.1415	8.384E-03	.1707	7.718E-03	.1571	.1000	.7500
76	561.1	5.298	6.750E-03	.1374	8.147E-03	.1659	7.521E-03	.1531	.3000	.7500
77	547.6	2.937	3.674E-03	.0749	4.424E-03	.0901	4.162E-03	.0847	.5000	.7500
78	556.8	5.077	6.433E-03	.1310	7.755E-03	.1579	7.536E-03	.1534	.7000	.7500
79	604.7	21.669	2.923E-02	.5952	3.571E-02	.7272	3.262E-02	.6641	.9000	.7500
80	594.8	13.716	1.802E-02	.3669	2.189E-02	.4457	2.007E-02	.4087	.1000	.8500
81	564.5	6.365	8.144E-03	.1658	9.839E-03	.2003	9.085E-03	.1850	.3000	.8500
83	593.0	13.210	1.731E-02	.3525	2.102E-02	.4280	1.923E-02	.3916	.5000	.8500
84	595.1	13.928	1.830E-02	.3727	2.224E-02	.4528	2.051E-02	.4175	.1000	.9500
85	573.5	10.504	1.360E-02	.2768	1.646E-02	.3352	1.594E-02	.3247	.5000	.9500
									.9000	.9500

11/12/71

AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21HA

GROUP	CONFIG	MODEL	MACH NO	Po,PSIA	To,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
4	1		8.00	674.8	1336	24.89	5.11	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.8	.069	3.096	3857	5.989E-05	7.795E-08	2.963E 06	4.342E-02	2.362E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.STO)	H(.STO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	ZY/B
1	516.8	3.389	4.136E-03	.0953	4.942E-03	.1138	3.681E-03	.0848	.0050		0
4	557.7	15.155	1.947E-02	.4484	2.358E-02	.5413	2.013E-02	.4637	.0120		0
2	541.9	10.231	1.288E-02	.2967	1.549E-02	.3567	1.387E-02	.3194	.0200		0
3	530.5	6.131	7.610E-03	.1753	9.123E-03	.2101	8.506E-03	.1959	.0400		0
6	524.9	4.403	5.428E-03	.1250	6.498E-03	.1496	6.173E-03	.1422	.0600		0
7	522.1	3.569	4.384E-03	.1010	5.245E-03	.1208	5.053E-03	.1164	.0800		0
8	519.1	3.028	3.706E-03	.0854	4.431E-03	.1020	4.307E-03	.0992	.1000		0
10	512.8	2.077	2.523E-03	.0581	3.011E-03	.0694	2.959E-03	.0681	.1500	0	0
12	518.9	4.108	5.026E-03	.1158	6.009E-03	.1384	5.903E-03	.1359	.1500	30.0000	
13	514.0	2.748	3.343E-03	.0770	3.992E-03	.0919	3.922E-03	.0903	.1500	45.5000	
16	509.5	1.916	2.318E-03	.0534	2.764E-03	.0637	2.732E-03	.0629	.2000		0
17	512.3	2.832	3.438E-03	.0792	4.103E-03	.0945	4.055E-03	.0934	.2000		.1070
19	507.9	1.813	2.189E-03	.0504	2.610E-03	.0601	2.576E-03	.0593	.2250		0
20	513.1	1.743	2.092E-03	.0482	2.492E-03	.0574	2.471E-03	.0569	.2500		0
22	502.8	1.664	1.997E-03	.0460	2.378E-03	.0548	2.361E-03	.0544	.2750		0
23	512.4	1.618	1.940E-03	.0447	2.311E-03	.0532	2.294E-03	.0528	.3000	0	0
24	515.9	2.642	3.182E-03	.0733	3.792E-03	.0873	3.764E-03	.0867	.3000	34.0000	
25	507.0	2.923	3.525E-03	.0812	4.203E-03	.0968	4.172E-03	.0961	.3000	40.0000	
26	508.1	3.116	3.763E-03	.0867	4.487E-03	.1033	4.454E-03	.1026	.3000	45.0000	
29	512.8	1.579	1.895E-03	.0436	2.256E-03	.0520	2.240E-03	.0516	.3250		0
30	503.2	1.544	1.854E-03	.0427	2.208E-03	.0509	2.192E-03	.0505	.3500		0
31	504.2	1.440	1.730E-03	.0398	2.061E-03	.0475	2.046E-03	.0471	.4000		0
32	505.9	1.809	2.178E-03	.0502	2.596E-03	.0598	2.577E-03	.0594	.4000		.1070
33	506.1	1.374	1.655E-03	.0381	1.972E-03	.0454	1.958E-03	.0451	.4500		0
34	508.2	1.394	1.672E-03	.0385	1.993E-03	.0459	1.979E-03	.0456	.5000		0
35	509.0	1.488	1.799E-03	.0414	2.146E-03	.0494	2.130E-03	.0491	.5000		.1070
37	511.6	1.309	1.588E-03	.0366	1.895E-03	.0436	1.881E-03	.0433	.5500		0
38	515.0	1.288	1.568E-03	.0361	1.873E-03	.0431	1.859E-03	.0428	.6000		0
39	516.0	1.371	1.672E-03	.0385	1.997E-03	.0460	1.982E-03	.0457	.6000		.1070
40	518.7	1.231	1.505E-03	.0347	1.799E-03	.0414	1.786E-03	.0411	.6500		0
41	522.6	1.236	1.519E-03	.0350	1.814E-03	.0419	1.805E-03	.0416	.7000		0
43	525.9	1.178	1.454E-03	.0335	1.741E-03	.0401	1.728E-03	.0398	.7500		0
44	529.0	1.276	1.581E-03	.0364	1.894E-03	.0436	1.880E-03	.0433	.8000		0
45	529.2	1.269	1.573E-03	.0362	1.885E-03	.0434	1.870E-03	.0431	.8000		.1070
46	531.6	1.471	1.828E-03	.0421	2.192E-03	.0505	2.192E-03	.0505	.8500		0
47	532.0	1.503	1.869E-03	.0430	2.241E-03	.0516	2.254E-03	.0519	.9000		0
48	532.0	1.549	1.926E-03	.0444	2.310E-03	.0532	2.323E-03	.0535	.9000		.1070
49	532.2	1.494	1.846E-03	.0425	2.214E-03	.0510	2.242E-03	.0516	.9500		0
50	532.8	1.781	2.217E-03	.0511	2.660E-03	.0612	2.704E-03	.0623	1.0000		0
51	535.6	2.774	3.464E-03	.0798	4.159E-03	.0958	4.229E-03	.0974	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
4	1		8.00	674.8	1336	24.89	5.11	30.00	190	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.8	.069	3.098	3857	5.989E-05	7.795E-08	2.963E 06	4.342E-02	2.362E-02	1

GAGE	Tw	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	510.0	2.813	3.405E-03	.0784	4.042E-03	.0935	3.952E-03	.0910	.0820	.2500
53	512.1	2.305	2.797E-03	.0644	3.338E-03	.0769	3.292E-03	.0758	.3020	.2500
54	517.0	1.540	1.942E-03	.0447	2.320E-03	.0534	2.286E-03	.0526	.4470	.2500
55	523.5	1.158	1.425E-03	.0328	1.705E-03	.0393	1.683E-03	.0388	.5910	.2500
56	531.1	2.055	2.553E-03	.0588	3.061E-03	.0705	3.052E-03	.0703	.7360	.2500
57	534.9	2.684	3.350E-03	.0771	4.020E-03	.0926	4.021E-03	.0926	.8810	.2500
58	535.8	6.821	8.523E-03	.1963	1.023E-02	.2356	9.747E-03	.2245	.0500	.4000
59	530.3	4.543	5.637E-03	.1298	6.757E-03	.1556	6.526E-03	.1503	.1000	.4000
60	528.6	3.078	3.812E-03	.0878	4.567E-03	.1052	4.434E-03	.1021	.2000	.4000
61	529.7	2.624	3.254E-03	.0749	3.900E-03	.0898	3.805E-03	.0876	.3000	.4000
62	533.4	2.439	3.039E-03	.0700	3.646E-03	.0840	3.587E-03	.0826	.5600	.4000
63	534.5	2.649	3.305E-03	.0761	3.965E-03	.0913	3.928E-03	.0905	.7000	.4000
64	532.3	1.959	2.438E-03	.0561	2.924E-03	.0673	2.975E-03	.0685	.9000	.4000
65	537.0	4.335	5.424E-03	.1249	6.513E-03	.1500	6.355E-03	.1464	.1760	.5000
66	536.4	3.215	4.020E-03	.0926	4.827E-03	.1112	4.699E-03	.1082	.4840	.5000
82	536.3	3.076	3.846E-03	.0886	4.617E-03	.1063	4.564E-03	.1051	.7000	.5000
67	532.2	2.035	2.532E-03	.0583	3.036E-03	.0699	3.097E-03	.0713	.9000	.5000
68	533.8	3.432	4.277E-03	.0985	5.132E-03	.1182	4.998E-03	.1151	.1000	.6000
69	530.5	1.781	2.211E-03	.0509	2.650E-03	.0610	2.583E-03	.0595	.2000	.6000
70	532.0	1.632	2.029E-03	.0467	2.433E-03	.0560	2.365E-03	.0545	.4300	.6000
71	536.1	3.291	4.101E-03	.0945	4.924E-03	.1134	4.829E-03	.1112	.6000	.6000
72	532.7	2.166	2.696E-03	.0621	3.233E-03	.0745	3.246E-03	.0748	.8000	.6000
73	531.4	1.761	2.188E-03	.0504	2.624E-03	.0604	2.674E-03	.0616	.9000	.6000
74	546.0	7.993	1.012E-02	.2330	1.218E-02	.2804	1.183E-02	.2725	.1000	.7500
75	557.0	10.379	1.332E-02	.3068	1.608E-02	.3703	1.562E-02	.3598	.3000	.7500
76	539.6	4.360	5.473E-03	.1261	6.576E-03	.1515	6.412E-03	.1477	.5000	.7500
77	534.4	4.099	5.100E-03	.1175	6.120E-03	.1410	6.060E-03	.1396	.7000	.7500
78	542.7	6.079	7.661E-03	.1764	9.212E-03	.2121	9.379E-03	.2160	.9000	.7500
79	549.6	8.858	1.126E-02	.2594	1.357E-02	.3124	1.316E-02	.3031	.1000	.8500
80	537.6	4.570	5.723E-03	.1318	6.873E-03	.1583	6.680E-03	.1538	.3000	.8500
81	552.7	9.225	1.177E-02	.2712	1.420E-02	.3269	1.384E-02	.3187	.5000	.8500
83	549.1	7.717	9.805E-03	.2258	1.181E-02	.2720	1.145E-02	.2636	.1000	.9500
84	535.3	3.479	4.344E-03	.1000	5.214E-03	.1201	5.091E-03	.1172	.5000	.9500
85	543.0	5.694	7.167E-03	.1651	8.619E-03	.1985	8.757E-03	.2017	.9000	.9500

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AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	FODFL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
5	1		8.00	677.6	1333	30.03	-.03	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.6	.069	3.109	3853	6.028E-05	7.776E-08	2.987E 06	4.349E-02	2.354E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	525.1	3.949	4.889E-03	.1124	5.855E-03	.1346	4.208E-03	.0967	.0050		0
4	578.2	15.925	2.110E-02	.4851	2.563E-02	.5892	2.114E-02	.4861	.0120		0
2	562.9	11.103	1.442E-02	.3315	1.744E-02	.4009	1.508E-02	.3468	.0200		0
3	551.1	6.997	8.949E-03	.2057	1.079E-02	.2480	9.749E-03	.2241	.0400		0
6	544.5	5.210	6.607E-03	.1519	7.952E-03	.1828	7.336E-03	.1687	.0600		0
7	539.8	4.215	5.315E-03	.1222	6.388E-03	.1469	5.985E-03	.1376	.0800		0
8	533.9	3.709	4.641E-03	.1067	5.570E-03	.1281	5.270E-03	.1212	.1000		0
10	521.4	2.796	3.445E-03	.0792	4.122E-03	.0948	3.949E-03	.0908	.1500	0	0
12	527.1	4.707	5.842E-03	.1343	6.999E-03	.1609	6.703E-03	.1541	.1500	30.0000	
13	520.5	2.898	3.567E-03	.0820	4.267E-03	.0981	4.088E-03	.0940	.1500	45.5000	
16	514.1	2.565	3.120E-03	.0717	3.727E-03	.0857	3.594E-03	.0826	.2000		0
17	516.5	3.282	4.020E-03	.0924	4.805E-03	.1105	4.633E-03	.1065	.2000		.1070
19	511.1	2.526	3.073E-03	.0707	3.668E-03	.0843	3.534E-03	.0812	.2250		0
20	501.5	2.519	3.030E-03	.0697	3.608E-03	.0830	3.494E-03	.0803	.2500		0
22	499.6	2.377	2.852E-03	.0656	3.395E-03	.0781	3.292E-03	.0757	.2750		0
23	499.1	2.311	2.772E-03	.0637	3.299E-03	.0759	3.199E-03	.0736	.3000	0	0
24	503.3	3.247	3.914E-03	.0900	4.663E-03	.1072	4.521E-03	.1039	.3000	34.0000	
25	504.9	3.447	4.163E-03	.0957	4.962E-03	.1141	4.811E-03	.1106	.3000	40.0000	
26	505.6	3.483	4.209E-03	.0968	5.018E-03	.1154	4.865E-03	.1118	.3000	45.0000	
29	499.5	2.250	2.699E-03	.0621	3.213E-03	.0739	3.116E-03	.0716	.3250		0
30	499.6	2.219	2.663E-03	.0612	3.170E-03	.0729	3.074E-03	.0707	.3500		0
31	500.2	2.222	2.668E-03	.0613	3.176E-03	.0730	3.080E-03	.0708	.4000		0
32	502.9	2.392	2.881E-03	.0662	3.433E-03	.0789	3.328E-03	.0765	.4000		.1070
33	502.8	1.948	2.346E-03	.0539	2.795E-03	.0643	2.710E-03	.0623	.4500		0
34	505.2	1.943	2.347E-03	.0540	2.798E-03	.0643	2.712E-03	.0624	.5000		0
35	506.9	1.945	2.355E-03	.0541	2.808E-03	.0646	2.722E-03	.0626	.5000		.1070
37	508.8	1.891	2.295E-03	.0528	2.737E-03	.0629	2.653E-03	.0610	.5500		0
38	512.6	1.933	2.356E-03	.0542	2.813E-03	.0647	2.726E-03	.0627	.6000		0
39	514.7	1.925	2.353E-03	.0541	2.811E-03	.0646	2.724E-03	.0626	.6000		.1070
40	516.6	2.005	2.456E-03	.0565	2.936E-03	.0675	2.845E-03	.0654	.6500		0
41	521.3	2.135	2.631E-03	.0605	3.148E-03	.0724	3.049E-03	.0701	.7000		0
43	525.8	2.405	2.980E-03	.0685	3.569E-03	.0821	3.457E-03	.0795	.7500		0
44	531.8	3.150	3.932E-03	.0904	4.716E-03	.1084	4.567E-03	.1050	.8000		0
45	531.7	2.836	3.540E-03	.0814	4.246E-03	.0976	4.111E-03	.0945	.8000		.1070
46	536.6	3.889	4.893E-03	.1123	5.865E-03	.1348	5.723E-03	.1316	.8500		0
47	537.6	3.946	4.961E-03	.1141	5.960E-03	.1370	5.855E-03	.1346	.9000		0
48	536.8	3.568	4.482E-03	.1030	5.383E-03	.1238	5.209E-03	.1216	.9000		.1070
49	537.3	3.958	4.975E-03	.1144	5.976E-03	.1374	5.912E-03	.1359	.9500		0
50	537.6	4.360	5.482E-03	.1260	6.586E-03	.1514	6.546E-03	.1505	1.0000		0
51	539.5	4.583	5.776E-03	.1328	6.943E-03	.1596	6.901E-03	.1587	1.0000		.2140

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
5	1		8.00	677.6	1333	30.03	-.03	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.6	.069	3.109	3853	6.028E-05	7.776E-08	2.987E 06	4.349E-02	2.354E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	508.7	3.211	3.895E-03	.0896	4.647E-03	.1068	4.408E-03	.1014	.0820	.2500
53	513.1	2.770	3.379E-03	.0777	4.035E-03	.0928	3.882E-03	.0892	.3020	.2500
54	518.0	2.013	2.470E-03	.0568	2.953E-03	.0679	2.838E-03	.0653	.4470	.2500
55	524.0	1.707	2.115E-03	.0485	2.527E-03	.0581	2.433E-03	.0559	.5910	.2500
56	534.4	3.104	3.887E-03	.0894	4.665E-03	.1073	4.539E-03	.1044	.7360	.2500
57	539.6	4.354	5.488E-03	.1262	6.596E-03	.1516	6.440E-03	.1481	.8810	.2500
58	534.2	6.498	8.048E-03	.1850	9.660E-03	.2221	8.956E-03	.2059	.0500	.4000
59	529.6	4.513	5.618E-03	.1292	6.736E-03	.1549	6.336E-03	.1457	.1000	.4000
60	529.9	3.291	4.093E-03	.0941	4.907E-03	.1128	4.641E-03	.1067	.2000	.4000
61	531.6	2.968	3.704E-03	.0852	4.443E-03	.1021	4.223E-03	.0971	.3000	.4000
62	538.0	3.026	3.800E-03	.0875	4.573E-03	.1051	4.386E-03	.1008	.5600	.4000
63	538.7	3.729	4.695E-03	.1080	5.642E-03	.1297	5.450E-03	.1253	.7000	.4000
64	534.8	3.656	3.82HE-03	.0880	4.596E-03	.1057	4.574E-03	.1052	.9000	.4000
65	539.5	4.466	5.629E-03	.1294	6.765E-03	.1555	6.430E-03	.1478	.1760	.5000
66	540.0	3.128	3.945E-03	.0907	4.742E-03	.1090	4.497E-03	.1034	.4840	.5000
82	540.8	3.650	4.60HE-03	.1059	5.540E-03	.1274	5.339E-03	.1228	.7000	.5000
67	534.9	2.880	3.609E-03	.0830	4.333E-03	.0996	4.323E-03	.0994	.9000	.5000
68	540.2	4.791	6.035E-03	.1388	7.256E-03	.1668	6.882E-03	.1582	.1000	.6000
69	542.3	4.120	5.211E-03	.1198	6.268E-03	.1441	5.948E-03	.1368	.2000	.6000
70	543.0	3.307	4.186E-03	.0962	5.036E-03	.1158	4.764E-03	.1095	.4300	.6000
71	540.5	2.554	3.223E-03	.0741	3.874E-03	.0891	3.702E-03	.0851	.6000	.6000
72	536.6	2.099	2.646E-03	.0606	3.166E-03	.0728	3.103E-03	.0714	.8000	.6000
73	534.7	2.267	2.765E-03	.0636	3.319E-03	.0763	3.309E-03	.0761	.9000	.6000
74	577.1	15.271	2.020E-02	.4645	2.453E-02	.5639	2.315E-02	.5322	.1000	.7500
75	545.2	3.674	4.664E-03	.1072	5.614E-03	.1291	5.314E-03	.1222	.3000	.7500
76	545.2	3.191	4.051E-03	.0931	4.876E-03	.1121	4.629E-03	.1064	.5000	.7500
77	535.3	1.730	2.169E-03	.0499	2.604E-03	.0599	2.515E-03	.0578	.7000	.7500
78	539.4	2.455	3.094E-03	.0711	3.718E-03	.0855	3.701E-03	.0851	.9000	.7500
79	561.5	10.424	1.351E-02	.3107	1.633E-02	.3756	1.541E-02	.3543	.1000	.8500
80	572.3	12.836	1.68HE-02	.3880	2.046E-02	.4705	1.931E-02	.4440	.3000	.8500
81	574.3	13.692	1.805E-02	.4149	2.189E-02	.5034	2.075E-02	.4770	.5000	.8500
83	564.8	7.155	9.194E-03	.2114	1.109E-02	.2551	1.046E-02	.2405	.1000	.9500
84	558.5	6.267	1.067E-02	.2454	1.289E-02	.2964	1.225E-02	.2816	.5000	.9500
85	566.0	6.026	1.033E-02	.2375	1.247E-02	.2867	1.238E-02	.2846	.9000	.9500

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
6	1		8.00	676.1	1331	34.96	-4.96	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .017SEC)	STFR (R= .017SEC)	SWITCH POSITION
96.4	.069	3.102	3850	6.024E-05	7.765E-08	2.987E 06	4.343E-02	2.354E-02	1

GAGE	Tw	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1.	525.4	4.626	5.743E-03	.1322	6.879E-03	.1584	4.792E-03	.1103	.0050		0
4	577.8	16.442	2.183E-02	.5027	2.652E-02	.6106	2.119E-02	.4880	.0120		0
2	563.4	11.779	1.535E-02	.3533	1.857E-02	.4274	1.558E-02	.3586	.0200		0
3	552.2	7.716	9.910E-03	.2282	1.195E-02	.2752	1.049E-02	.2415	.0400		0
6	545.8	5.958	7.589E-03	.1747	9.137E-03	.2104	8.195E-03	.1887	.0600		0
7	541.2	4.941	6.257E-03	.1440	7.525E-03	.1732	6.860E-03	.1579	.0800		0
8	534.7	4.311	5.415E-03	.1247	6.502E-03	.1497	5.990E-03	.1379	.1000		0
10	521.6	3.413	4.217E-03	.0971	5.047E-03	.1162	4.714E-03	.1085	.1500	0	0
12	527.6	5.386	6.704E-03	.1544	8.036E-03	.1850	7.500E-03	.1727	.1500	30.0000	
13	519.6	3.027	3.730E-03	.0859	4.462E-03	.1027	4.168E-03	.0960	.1500	45.5000	
16	513.5	3.314	4.055E-03	.0934	4.843E-03	.1115	4.556E-03	.1049	.2000		0
17	516.4	3.976	4.881E-03	.1124	5.835E-03	.1343	5.487E-03	.1263	.2000		.1070
19	509.6	3.201	3.897E-03	.0897	4.651E-03	.1071	4.371E-03	.1006	.2250		0
20	495.9	3.191	3.822E-03	.0880	4.547E-03	.1047	4.300E-03	.0990	.2500		0
22	494.7	3.033	3.627E-03	.0835	4.313E-03	.0993	4.085E-03	.0940	.2750		0
23	494.2	2.884	3.447E-03	.0794	4.099E-03	.0944	3.881E-03	.0894	.3000	0	0
24	498.8	3.799	4.566E-03	.1051	5.435E-03	.1251	5.145E-03	.1185	.3000	34.0000	
25	500.9	4.099	4.938E-03	.1137	5.881E-03	.1354	5.567E-03	.1282	.3000	40.0000	
26	502.0	4.100	4.947E-03	.1139	5.893E-03	.1357	5.577E-03	.1284	.3000	45.0000	
29	495.2	2.752	3.293E-03	.0758	3.917E-03	.0902	3.709E-03	.0854	.3250		0
30	495.9	2.763	3.309E-03	.0762	3.936E-03	.0906	3.727E-03	.0858	.3500		0
31	497.7	2.640	3.168E-03	.0729	3.770E-03	.0868	3.569E-03	.0822	.4000		0
32	500.0	2.818	3.392E-03	.0781	4.039E-03	.0930	3.823E-03	.0880	.4000		.1070
33	500.5	2.607	3.140E-03	.0723	3.739E-03	.0861	3.539E-03	.0815	.4500		0
34	503.0	2.566	3.099E-03	.0714	3.693E-03	.0850	3.495E-03	.0805	.5000		.1070
35	504.3	2.411	2.917E-03	.0672	3.477E-03	.0800	3.290E-03	.0757	.5000		0
37	507.2	2.537	3.079E-03	.0709	3.673E-03	.0846	3.475E-03	.0800	.5500		.1070
38	511.5	2.695	3.277E-03	.0754	3.912E-03	.0901	3.700E-03	.0852	.6000		0
39	513.3	2.630	3.216E-03	.0740	3.842E-03	.0884	3.633E-03	.0836	.6000		.1070
40	516.4	2.969	3.646E-03	.0839	4.358E-03	.1003	4.120E-03	.0948	.6500		0
41	522.7	3.561	4.406E-03	.1014	5.274E-03	.1214	4.984E-03	.1147	.7000		0
43	528.3	4.002	4.986E-03	.1148	5.977E-03	.1376	5.645E-03	.1300	.7500		0
44	536.3	5.291	6.658E-03	.1533	7.998E-03	.1841	7.548E-03	.1738	.8000		0
45	537.1	5.382	6.780E-03	.1561	8.146E-03	.1875	7.688E-03	.1770	.8000		.1070
46	542.7	6.295	7.987E-03	.1839	9.610E-03	.2212	9.142E-03	.2105	.8500		0
47	542.8	5.933	7.527E-03	.1733	9.057E-03	.2085	8.679E-03	.1998	.9000		0
48	542.3	5.849	7.417E-03	.1708	8.923E-03	.2054	8.550E-03	.1969	.9000		.1070
49	542.8	5.840	7.410E-03	.1706	8.915E-03	.2053	8.609E-03	.1982	.9500		0
50	542.4	6.201	7.864E-03	.1811	9.461E-03	.2178	9.183E-03	.2114	1.0000		0
51	542.8	6.180	7.842E-03	.1805	9.435E-03	.2172	9.157E-03	.2108	1.0000		.2140

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21HA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREHEND	ROLL MODEL	YAW
6	1		8.00	676.1	1331	34.96	-4.96	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.4	.069	3.102	3850	6.024E-05	7.765E-08	2.987E 06	4.343E-02	2.354E-02	1

GAGE	TW	GDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	504.8	3.479	4.211E-03	.0970	5.020E-03	.1156	4.644E-03	.1069	.0820	.2500
53	508.6	3.193	3.883E-03	.0894	4.633E-03	.1067	4.349E-03	.1001	.3020	.2500
54	514.8	2.518	3.086E-03	.0711	3.687E-03	.0849	3.457E-03	.0796	.4470	.2500
55	524.1	2.990	3.706E-03	.0853	4.438E-03	.1022	4.165E-03	.0959	.5910	.2500
56	538.5	5.590	7.054E-03	.1624	8.478E-03	.1952	8.042E-03	.1852	.7360	.2500
57	543.5	6.407	8.137E-03	.1873	9.792E-03	.2255	9.322E-03	.2146	.8810	.2500
58	528.8	6.174	7.696E-03	.1772	9.227E-03	.2124	8.330E-03	.1918	.0500	.4000
59	525.2	4.656	5.779E-03	.1331	6.923E-03	.1594	6.343E-03	.1460	.1000	.4000
60	525.5	3.662	4.547E-03	.1047	5.447E-03	.1254	5.020E-03	.1156	.2000	.4000
61	528.0	3.555	4.428E-03	.1019	5.308E-03	.1222	4.916E-03	.1132	.3000	.4000
62	537.5	4.714	5.942E-03	.1368	7.139E-03	.1644	6.671E-03	.1536	.5600	.4000
63	539.0	5.399	6.819E-03	.1570	8.196E-03	.1887	7.717E-03	.1777	.7000	.4000
64	536.2	4.657	5.860E-03	.1349	7.039E-03	.1621	6.842E-03	.1575	.9000	.4000
65	533.7	4.778	5.993E-03	.1380	7.195E-03	.1656	6.664E-03	.1534	.1760	.5000
66	536.1	4.028	5.068E-03	.1167	6.087E-03	.1401	5.623E-03	.1295	.4840	.5000
82	537.5	4.505	5.678E-03	.1307	6.822E-03	.1571	6.409E-03	.1476	.7000	.5000
67	533.4	4.036	5.060E-03	.1165	6.074E-03	.1398	5.921E-03	.1363	.9000	.5000
68	537.8	6.028	7.600E-03	.1750	9.133E-03	.2103	8.437E-03	.1942	.1000	.6000
69	537.9	5.071	6.394E-03	.1472	7.683E-03	.1769	7.103E-03	.1635	.2000	.6000
70	539.7	4.889	6.179E-03	.1423	7.429E-03	.1710	6.844E-03	.1576	.4300	.6000
71	534.8	3.570	4.485E-03	.1033	5.385E-03	.1240	5.016E-03	.1155	.6000	.6000
72	532.6	3.148	3.968E-03	.0914	4.762E-03	.1096	4.556E-03	.1049	.8000	.6000
73	531.9	3.193	3.996E-03	.0920	4.794E-03	.1104	4.669E-03	.1075	.9000	.6000
74	548.5	8.516	1.088E-02	.2506	1.312E-02	.3020	1.208E-02	.2781	.1000	.7500
75	537.2	4.008	5.050E-03	.1163	6.068E-03	.1397	5.596E-03	.1288	.3000	.7500
76	537.7	3.722	4.692E-03	.1080	5.638E-03	.1298	5.215E-03	.1201	.5000	.7500
77	526.9	2.079	2.586E-03	.0595	3.099E-03	.0713	2.919E-03	.0672	.7000	.7500
78	531.6	3.041	3.804E-03	.0876	4.564E-03	.1051	4.439E-03	.1022	.9000	.7500
79	576.5	17.691	2.345E-02	.5399	2.847E-02	.6555	2.608E-02	.6004	.1000	.8500
80	557.5	10.651	1.377E-02	.3170	1.663E-02	.3829	1.529E-02	.3521	.3000	.8500
81	540.4	4.569	5.780E-03	.1331	6.950E-03	.1600	6.431E-03	.1481	.5000	.8500
83	558.1	10.977	1.420E-02	.3270	1.716E-02	.3951	1.574E-02	.3623	.1000	.9500
84	559.1	11.457	1.485E-02	.3418	1.794E-02	.4130	1.658E-02	.3817	.5000	.9500
85	549.3	8.172	1.045E-02	.2407	1.260E-02	.2901	1.221E-02	.2812	.9000	.9500

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL 9
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	P0,PSIA	T0,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
7	1		8.00	546.2	1320	24.97	5.03	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.6	.056	2.506	3934	4.908E-05	7.700E-08	2.443E 06	3.898E-02	2.606E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	549.2	2.951	3.644E-03	.0934	4.348E-03	.1115	3.238E-03	.0831	.0050		0
4	548.5	13.337	1.728E-02	.4432	2.044E-02	.5247	1.786E-02	.4581	.0120		0
2	534.3	9.012	1.147E-02	.2943	1.379E-02	.3538	1.235E-02	.3167	.0200		0
3	523.4	5.430	6.822E-03	.1750	8.178E-03	.2098	7.621E-03	.1955	.0400		0
6	518.5	3.903	4.871E-03	.1249	5.831E-03	.1496	5.538E-03	.1421	.0600		0
7	515.5	3.156	3.923E-03	.1006	4.693E-03	.1204	4.520E-03	.1160	.0800		0
8	511.9	2.637	3.263E-03	.0837	3.901E-03	.1001	3.790E-03	.0972	.1000		0
10	504.8	1.818	2.231E-03	.0572	2.662E-03	.0683	2.615E-03	.0671	.1500	0	0
12	511.6	3.614	4.472E-03	.1147	5.344E-03	.1371	5.248E-03	.1346	.1500	30.0000	
13	507.7	2.499	2.966E-03	.0761	3.542E-03	.0909	3.479E-03	.0892	.1500	45.5000	
16	500.9	1.657	2.023E-03	.0519	2.412E-03	.0619	2.383E-03	.0611	.2000		0
17	504.9	2.431	2.983E-03	.0765	3.560E-03	.0913	3.516E-03	.0902	.2000		.1070
19	498.8	1.576	1.920E-03	.0493	2.288E-03	.0587	2.258E-03	.0579	.2250		0
20	490.6	1.532	1.847E-03	.0474	2.197E-03	.0564	2.178E-03	.0559	.2500		0
22	490.1	1.455	1.753E-03	.0450	2.085E-03	.0535	2.069E-03	.0531	.2750		0
23	490.0	1.415	1.705E-03	.0437	2.027E-03	.0520	2.012E-03	.0516	.3000	0	0
24	493.4	2.327	2.816E-03	.0722	3.351E-03	.0860	3.325E-03	.0853	.3000	34.0000	
25	494.8	2.574	3.120E-03	.0800	3.714E-03	.0953	3.686E-03	.0946	.3000	40.0000	
26	496.3	2.767	3.360E-03	.0862	4.002E-03	.1026	3.971E-03	.1019	.3000	45.0000	
29	490.9	1.385	1.671E-03	.0429	1.987E-03	.0510	1.972E-03	.0506	.3250		0
30	491.5	1.379	1.666E-03	.0427	1.980E-03	.0508	1.966E-03	.0504	.3500		0
31	492.9	1.235	1.494E-03	.0383	1.777E-03	.0456	1.764E-03	.0452	.4000		0
32	495.1	1.572	1.906E-03	.0489	2.270E-03	.0582	2.252E-03	.0578	.4000		.1070
33	495.4	1.186	1.439E-03	.0369	1.713E-03	.0440	1.700E-03	.0436	.4500		0
34	497.8	1.297	1.569E-03	.0377	1.749E-03	.0449	1.736E-03	.0445	.5000		0
35	499.1	1.253	1.526E-03	.0391	1.819E-03	.0467	1.805E-03	.0463	.5000		.1070
37	501.6	1.119	1.367E-03	.0351	1.630E-03	.0418	1.618E-03	.0415	.5500		0
38	505.4	1.054	1.295E-03	.0332	1.545E-03	.0396	1.533E-03	.0393	.6000		0
39	506.7	1.126	1.385E-03	.0355	1.654E-03	.0424	1.641E-03	.0421	.6000		.1070
40	509.4	.994	1.226E-03	.0315	1.465E-03	.0376	1.454E-03	.0373	.6500		0
41	513.7	.905	1.123E-03	.0288	1.342E-03	.0344	1.332E-03	.0342	.7000		0
43	517.5	.833	1.039E-03	.0266	1.243E-03	.0319	1.233E-03	.0316	.7500		0
44	520.8	.768	9.606E-04	.0246	1.151E-03	.0295	1.142E-03	.0293	.8000		0
45	521.2	.755	9.831E-04	.0252	1.178E-03	.0302	1.168E-03	.0300	.8000		.1070
46	523.5	.709	8.901E-04	.0228	1.067E-03	.0274	1.058E-03	.0274	.8500		0
47	524.1	.667	8.386E-04	.0215	1.005E-03	.0258	1.011E-03	.0259	.9000		0
48	524.1	.752	9.448E-04	.0242	1.133E-03	.0291	1.139E-03	.0292	.9000		.1070
49	524.4	.603	7.586E-04	.0195	9.095E-04	.0233	9.204E-04	.0236	.9500		0
50	524.1	.760	9.549E-04	.0245	1.145E-03	.0294	1.163E-03	.0298	1.0000		0
51	525.9	1.329	1.674E-03	.0429	2.008E-03	.0515	2.041E-03	.0523	1.0000		.2140

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
7	1		8.00	546.2	1320	24.97	5.03	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.6	.056	2.504	3834	4.908E-05	7.700E-08	2.443E 06	3.898E-02	2.606E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	499.5	2.454	2.992E-03	.0768	3.566E-03	.0915	3.469E-03	.0890	.0820	.2500
53	512.3	2.017	2.468E-03	.0639	2.943E-03	.0755	2.900E-03	.0744	.3020	.2500
54	517.8	1.355	1.668E-03	.0428	1.992E-03	.0511	1.962E-03	.0503	.4470	.2500
55	514.4	.901	1.118E-03	.0287	1.337E-03	.0343	1.319E-03	.0338	.5910	.2500
56	521.9	1.135	1.423E-03	.0365	1.705E-03	.0437	1.699E-03	.0436	.7360	.2500
57	525.2	1.349	1.697E-03	.0435	2.036E-03	.0522	2.035E-03	.0522	.8810	.2500
58	524.7	6.028	7.581E-03	.1945	9.090E-03	.2332	8.660E-03	.2221	.0500	.4000
59	519.0	3.794	4.737E-03	.1215	5.672E-03	.1455	5.477E-03	.1405	.1000	.4000
60	518.3	2.667	3.327E-03	.0853	3.983E-03	.1022	3.866E-03	.0992	.2000	.4000
61	519.6	2.252	2.815E-03	.0722	3.371E-03	.0865	3.287E-03	.0843	.3000	.4000
62	523.6	1.772	2.225E-03	.0571	2.668E-03	.0684	2.624E-03	.0673	.5600	.4000
63	524.3	1.741	2.189E-03	.0562	2.624E-03	.0673	2.599E-03	.0667	.7000	.4000
64	522.6	1.078	1.352E-03	.0347	1.620E-03	.0415	1.649E-03	.0423	.9000	.4000
65	526.1	3.826	4.820E-03	.1236	5.781E-03	.1483	5.639E-03	.1447	.1760	.5000
66	525.7	2.560	3.224E-03	.0827	3.867E-03	.0992	3.764E-03	.0966	.4840	.5000
82	526.0	2.392	3.013E-03	.0773	3.614E-03	.0927	3.571E-03	.0916	.7000	.5000
67	522.5	1.472	1.847E-03	.0474	2.213E-03	.0568	2.256E-03	.0579	.9000	.5000
68	522.6	3.002	3.766E-03	.0966	4.513E-03	.1158	4.394E-03	.1127	.1000	.6000
69	520.5	1.519	1.900E-03	.0487	2.276E-03	.0584	2.218E-03	.0569	.2000	.6000
70	522.2	1.282	1.607E-03	.0412	1.926E-03	.0494	1.871E-03	.0480	.4300	.6000
71	522.9	1.611	2.022E-03	.0519	2.423E-03	.0622	2.376E-03	.0610	.6000	.6000
72	521.7	1.237	1.550E-03	.0398	1.857E-03	.0476	1.864E-03	.0478	.8000	.6000
73	521.3	1.049	1.364E-03	.0350	1.634E-03	.0419	1.664E-03	.0427	.9000	.6000
74	533.8	6.484	8.249E-03	.2116	9.914E-03	.2543	9.632E-03	.2471	.1000	.7500
75	541.1	7.748	9.950E-03	.2553	1.198E-02	.3073	1.164E-02	.2986	.3000	.7500
76	527.7	3.018	3.810E-03	.0977	4.572E-03	.1173	4.457E-03	.1143	.5000	.7500
77	520.3	1.568	1.961E-03	.0503	2.349E-03	.0603	2.325E-03	.0596	.7000	.7500
78	527.2	3.441	4.341E-03	.1113	5.208E-03	.1336	5.299E-03	.1359	.9000	.7500
79	539.5	7.826	1.003E-02	.2573	1.207E-02	.3096	1.171E-02	.3003	.1000	.8500
80	526.9	3.365	4.244E-03	.1089	5.091E-03	.1306	4.947E-03	.1269	.3000	.8500
81	541.0	7.632	9.800E-03	.2514	1.180E-02	.3027	1.150E-02	.2950	.5000	.8500
83	538.9	6.690	8.567E-03	.2196	1.031E-02	.2644	9.989E-03	.2562	.1000	.9500
84	527.0	3.003	3.788E-03	.0972	4.545E-03	.1166	4.437E-03	.1138	.5000	.9500
85	532.6	4.424	5.620E-03	.1442	6.752E-03	.1732	6.857E-03	.1759	.9000	.9500

11/12/73

AEDC(AHO•INC•) ARNOLD AFS• TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
8	1		7.98	544.3	1310	29.98	.02	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.4	.057	2.526	3818	4.985E-05	7.677E-08	2.480E 06	3.908E-02	2.584E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	509.7	3.400	4.250E-03	.1087	5.082E-03	.1300	3.663E-03	.0937	.0050		0
4	555.5	13.879	1.849E-02	.4708	2.227E-02	.5697	1.844E-02	.4719	.0120		0
2	541.8	9.711	1.264E-02	.3235	1.524E-02	.3900	1.322E-02	.3383	.0200		0
3	531.0	6.103	7.836E-03	.2005	9.420E-03	.2410	8.528E-03	.2182	.0400		0
6	524.8	4.563	5.813E-03	.1487	6.978E-03	.1785	6.447E-03	.1649	.0600		0
7	520.8	3.722	4.716E-03	.1207	5.655E-03	.1447	5.305E-03	.1357	.0800		0
8	515.3	3.251	4.092E-03	.1047	4.899E-03	.1254	4.640E-03	.1187	.1000		0
10	515.1	2.385	2.963E-03	.0758	3.539E-03	.0906	3.393E-03	.0868	.1500	0	0
12	512.4	4.065	5.097E-03	.1304	6.099E-03	.1561	5.845E-03	.1496	.1500	30.0000	
13	507.5	2.494	3.109E-03	.0796	3.716E-03	.0951	3.562E-03	.0911	.1500	45.5000	
16	500.8	2.228	2.754E-03	.0705	3.286E-03	.0841	3.171E-03	.0811	.2000		0
17	505.1	2.409	3.490E-03	.0893	4.169E-03	.1067	4.021E-03	.1029	.2000		.1070
19	499.1	2.169	2.675E-03	.0685	3.191E-03	.0816	3.075E-03	.0787	.2250		0
20	493.1	2.126	2.604E-03	.0666	3.101E-03	.0793	3.004E-03	.0769	.2500		0
22	492.2	2.025	2.477E-03	.0634	2.949E-03	.0755	2.861E-03	.0732	.2750		0
23	492.2	1.975	2.416E-03	.0618	2.877E-03	.0736	2.790E-03	.0714	.3000	0	0
24	496.2	2.777	3.413E-03	.0873	4.068E-03	.1041	3.945E-03	.1009	.3000	34.0000	
25	497.5	2.965	3.650E-03	.0934	4.352E-03	.1113	4.220E-03	.1080	.3000	40.0000	
26	498.0	2.982	3.673E-03	.0940	4.380E-03	.1121	4.247E-03	.1087	.3000	45.0000	
29	493.2	1.912	2.341E-03	.0599	2.788E-03	.0713	2.704E-03	.0692	.3250		0
30	493.6	1.891	2.316E-03	.0593	2.759E-03	.0706	2.676E-03	.0685	.3500		0
31	494.3	1.703	2.089E-03	.0534	2.488E-03	.0637	2.413E-03	.0617	.4000		0
32	496.9	1.986	2.443E-03	.0625	2.912E-03	.0745	2.824E-03	.0723	.4000		.1070
33	496.9	1.641	2.019E-03	.0517	2.406E-03	.0616	2.334E-03	.0597	.4500		0
34	499.3	1.590	1.962E-03	.0502	2.340E-03	.0599	2.269E-03	.0581	.5000		0
35	501.0	1.591	1.967E-03	.0503	2.347E-03	.0601	2.276E-03	.0582	.5000		.1070
37	503.1	1.507	1.868E-03	.0478	2.230E-03	.0571	2.162E-03	.0553	.5500		0
38	507.1	1.501	1.870E-03	.0478	2.234E-03	.0572	2.165E-03	.0554	.6000		0
39	509.1	1.510	1.886E-03	.0483	2.255E-03	.0577	2.185E-03	.0559	.6000		.1070
40	511.1	1.469	1.839E-03	.0471	2.200E-03	.0563	2.132E-03	.0545	.6500		0
41	515.3	1.426	1.795E-03	.0459	2.149E-03	.0550	2.082E-03	.0533	.7000		0
43	519.1	1.458	1.844E-03	.0472	2.210E-03	.0565	2.141E-03	.0548	.7500		0
44	523.1	1.640	2.136E-03	.0546	2.562E-03	.0656	2.482E-03	.0635	.8000		0
45	523.7	1.505	1.914E-03	.0490	2.297E-03	.0588	2.224E-03	.0569	.8000		.1070
46	526.4	1.878	2.397E-03	.0613	2.879E-03	.0737	2.810E-03	.0719	.8500		0
47	527.2	1.953	2.495E-03	.0638	2.996E-03	.0767	2.945E-03	.0753	.9000		0
48	527.1	1.796	2.294E-03	.0587	2.755E-03	.0705	2.707E-03	.0693	.9000		.1070
49	527.1	1.995	2.548E-03	.0652	3.060E-03	.0783	3.029E-03	.0775	.9500		0
50	527.0	2.345	3.021E-03	.0773	3.628E-03	.0928	3.607E-03	.0923	1.0000		0
51	528.9	2.686	3.442E-03	.0881	4.135E-03	.1058	4.111E-03	.1052	1.0000		.2140

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
8	1		7.98	544.3	1310	29.98	.02	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.4	.057	2.524	3818	4.985E-05	7.677E-08	2.480E 06	3.908E-02	2.594E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	512.1	2.810	3.478E-03	.0890	4.152E-03	.1062	3.939E-03	.1008	.0820	.2500
53	516.2	2.345	2.920E-03	.0747	3.489E-03	.0893	3.357E-03	.0859	.3020	.2500
54	511.9	1.629	2.041E-03	.0522	2.442E-03	.0625	2.347E-03	.0601	.4470	.2500
55	518.1	1.186	1.498E-03	.0383	1.795E-03	.0459	1.728E-03	.0442	.5910	.2500
56	525.8	1.767	2.253E-03	.0577	2.705E-03	.0692	2.633E-03	.0674	.7360	.2500
57	528.6	2.348	3.005E-03	.0769	3.611E-03	.0924	3.527E-03	.0902	.8810	.2500
58	526.5	5.640	7.201E-03	.1842	8.646E-03	.2212	8.017E-03	.2051	.0500	.4000
59	521.9	3.694	4.688E-03	.1200	5.623E-03	.1439	5.290E-03	.1354	.1000	.4000
60	522.7	2.795	3.551E-03	.0909	4.260E-03	.1090	4.029E-03	.1031	.2000	.4000
61	525.7	2.488	3.173E-03	.0812	3.810E-03	.0975	3.621E-03	.0927	.3000	.4000
62	530.1	2.124	2.724E-03	.0697	3.275E-03	.0838	3.141E-03	.0804	.5600	.4000
63	529.6	2.461	3.155E-03	.0807	3.791E-03	.0970	3.663E-03	.0937	.7000	.4000
64	525.7	1.815	2.315E-03	.0592	2.779E-03	.0711	2.767E-03	.0708	.9000	.4000
65	533.1	5.802	4.895E-03	.1252	5.887E-03	.1506	5.596E-03	.1432	.1760	.5000
66	533.2	2.487	3.202E-03	.0819	3.851E-03	.0985	3.652E-03	.0934	.4840	.5000
62	531.7	2.601	3.342E-03	.0855	4.019E-03	.1028	3.874E-03	.0991	.7000	.5000
67	526.5	1.990	2.541E-03	.0650	3.051E-03	.0781	3.045E-03	.0779	.9000	.5000
68	533.6	3.970	5.114E-03	.1308	6.152E-03	.1574	5.836E-03	.1493	.1000	.6000
69	536.4	3.454	4.465E-03	.1143	5.376E-03	.1375	5.102E-03	.1305	.2000	.6000
70	536.5	2.696	3.496E-03	.0892	4.197E-03	.1074	3.970E-03	.1016	.4300	.6000
71	532.4	1.774	2.282E-03	.0584	2.745E-03	.0702	2.624E-03	.0671	.6000	.6000
72	528.9	1.459	1.868E-03	.0478	2.244E-03	.0574	2.200E-03	.0563	.8000	.6000
73	527.1	1.526	1.950E-03	.0499	2.342E-03	.0599	2.335E-03	.0597	.9000	.6000
74	561.0	10.868	1.451E-02	.3713	1.759E-02	.4500	1.661E-02	.4251	.1000	.7500
75	539.5	3.032	3.936E-03	.1007	4.742E-03	.1213	4.489E-03	.1149	.3000	.7500
76	539.0	2.629	3.411E-03	.0873	4.109E-03	.1051	3.901E-03	.0998	.5000	.7500
77	529.6	1.292	1.655E-03	.0424	1.989E-03	.0509	1.921E-03	.0492	.7000	.7500
78	532.4	1.785	2.296E-03	.0588	2.762E-03	.0707	2.749E-03	.0703	.9000	.7500
79	553.7	8.427	1.114E-02	.2851	1.348E-02	.3449	1.272E-02	.3254	.1000	.8500
80	542.2	10.353	1.385E-02	.3543	1.679E-02	.4296	1.585E-02	.4056	.3000	.8500
81	563.4	11.026	1.477E-02	.3779	1.791E-02	.4584	1.698E-02	.4345	.5000	.8500
83	549.1	5.973	7.852E-03	.2009	9.485E-03	.2427	8.943E-03	.2288	.1000	.9500
84	551.0	6.726	8.863E-03	.2268	1.071E-02	.2741	1.018E-02	.2604	.5000	.9500
85	548.4	6.434	8.449E-03	.2162	1.020E-02	.2611	1.013E-02	.2593	.9000	.9500

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
9	1		7.98	544.7	1315	34.99	-4.99	30.00	180	=0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.7	.057	2.528	3826	4.970E-05	7.706E-08	2.467E 06	3.912E-02	2.589E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	511.9	4.055	5.051E-03	.1291	6.041E-03	.1544	4.221E-03	.1079	.0050		0
4	549.8	14.664	1.917E-02	.4900	2.315E-02	.5917	1.862E-02	.4760	.0120		0
2	536.8	10.533	1.354E-02	.3461	1.629E-02	.4165	1.374E-02	.3511	.0200		0
3	527.7	6.939	8.816E-03	.2253	1.058E-02	.2705	9.319E-03	.2382	.0400		0
6	522.7	5.330	6.730E-03	.1720	8.069E-03	.2063	7.255E-03	.1854	.0600		0
7	519.5	4.405	5.540E-03	.1416	6.637E-03	.1696	6.062E-03	.1549	.0800		0
8	515.4	3.792	4.743E-03	.1212	5.677E-03	.1451	5.237E-03	.1339	.1000		0
10	507.4	2.967	3.675E-03	.0939	4.390E-03	.1122	4.102E-03	.1049	.1500	0	0
12	514.4	4.693	5.864E-03	.1499	7.017E-03	.1794	6.552E-03	.1675	.1500	30.0000	
13	507.9	2.604	3.227E-03	.0825	3.855E-03	.0985	3.602E-03	.0921	.1500	45.5000	
16	503.3	2.876	3.544E-03	.0906	4.230E-03	.1081	3.980E-03	.1017	.2000		0
17	506.9	3.448	4.267E-03	.1091	5.097E-03	.1303	4.794E-03	.1225	.2000		.1070
19	501.1	2.788	3.426E-03	.0876	4.087E-03	.1045	3.841E-03	.0982	.2250		0
20	493.3	2.711	3.300E-03	.0844	3.929E-03	.1004	3.714E-03	.0949	.2500		0
22	492.6	2.563	3.117E-03	.0797	3.711E-03	.0949	3.512E-03	.0898	.2750		0
23	492.4	2.460	2.992E-03	.0765	3.561E-03	.0910	3.370E-03	.0862	.3000	0	0
24	496.7	3.263	3.989E-03	.1020	4.752E-03	.1215	4.497E-03	.1149	.3000	34.0000	
25	498.4	3.519	4.311E-03	.1102	5.138E-03	.1313	4.861E-03	.1243	.3000	40.0000	
26	499.5	3.547	4.351E-03	.1112	5.188E-03	.1326	4.907E-03	.1254	.3000	45.0000	
29	493.2	2.424	2.951E-03	.0754	3.513E-03	.0898	3.325E-03	.0850	.3250		0
30	493.7	2.422	2.949E-03	.0754	3.512E-03	.0898	3.324E-03	.0850	.3500		0
31	495.3	2.259	2.757E-03	.0705	3.284E-03	.0839	3.108E-03	.0794	.4000		0
32	498.3	2.433	2.980E-03	.0762	3.552E-03	.0908	3.361E-03	.0859	.4000		.1070
33	498.5	2.210	2.708E-03	.0692	3.228E-03	.0825	3.054E-03	.0781	.4500		0
34	501.2	2.127	2.614E-03	.0668	3.118E-03	.0797	2.949E-03	.0754	.5000		0
35	503.0	1.961	2.416E-03	.0618	2.883E-03	.0737	2.727E-03	.0697	.5000		.1070
37	505.1	2.008	2.461E-03	.0634	2.962E-03	.0757	2.800E-03	.0716	.5500		0
38	509.3	2.025	2.515E-03	.0643	3.005E-03	.0768	2.841E-03	.0726	.6000		0
39	511.5	1.973	2.457E-03	.0628	2.937E-03	.0751	2.776E-03	.0710	.6000		.1070
40	513.7	2.059	2.573E-03	.0657	3.075E-03	.0786	2.905E-03	.0743	.6500		0
41	518.5	2.154	2.705E-03	.0691	3.240E-03	.0828	3.060E-03	.0782	.7000		0
43	522.6	2.303	2.907E-03	.0743	3.486E-03	.0891	3.291E-03	.0841	.7500		0
44	527.8	2.816	3.579E-03	.0915	4.296E-03	.1098	4.055E-03	.1036	.8000		0
45	528.6	2.674	3.401E-03	.0869	4.084E-03	.1044	3.854E-03	.0985	.8000		.1070
46	532.2	3.234	4.132E-03	.1056	4.967E-03	.1270	4.726E-03	.1208	.8500		0
47	533.1	3.358	4.294E-03	.1098	5.165E-03	.1320	4.950E-03	.1265	.9000		0
48	533.1	3.300	4.221E-03	.1079	5.075E-03	.1297	4.863E-03	.1243	.9000		.1070
49	533.9	3.479	4.455E-03	.1139	5.357E-03	.1369	5.173E-03	.1322	.9500		0
50	534.2	3.972	5.089E-03	.1301	6.120E-03	.1564	5.939E-03	.1518	1.0000		0
51	535.4	4.182	5.367E-03	.1372	6.456E-03	.1650	6.265E-03	.1601	1.0000		.2140

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
9	1		7.98	544.7	1315	34.99	-4.99	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175ET)	STFR (R= .0175FT)	SWITCH POSITION
95.7	.057	2.529	3426	4.970E-05	7.706E-08	2.467E 06	3.912E-02	2.589E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	503.4	3.092	3.798E-03	.0971	4.533E-03	.1159	4.191E-03	.1071	.0820	.2500
53	508.0	2.772	3.436E-03	.0878	4.105E-03	.1049	3.851E-03	.0984	.3020	.2500
54	514.1	1.955	2.442E-03	.0624	2.922E-03	.0747	2.737E-03	.0700	.4470	.2500
55	522.0	1.727	2.179E-03	.0557	2.612E-03	.0668	2.450E-03	.0626	.5910	.2500
56	531.4	2.916	3.722E-03	.0951	4.472E-03	.1143	4.242E-03	.1084	.7360	.2500
57	535.0	3.811	4.888E-03	.1249	5.879E-03	.1503	5.596E-03	.1431	.8810	.2500
58	527.8	5.443	6.917E-03	.1768	8.305E-03	.2123	7.490E-03	.1914	.0500	.4000
59	524.7	3.960	5.013E-03	.1281	6.013E-03	.1537	5.505E-03	.1407	.1000	.4000
60	526.2	3.015	3.824E-03	.0977	4.589E-03	.1173	4.225E-03	.1080	.2000	.4000
61	529.3	2.706	3.445E-03	.0881	4.138E-03	.1058	3.829E-03	.0979	.3000	.4000
62	535.1	2.757	3.536E-03	.0904	4.253E-03	.1087	3.972E-03	.1015	.5600	.4000
63	534.9	3.119	3.999E-03	.1022	4.810E-03	.1230	4.527E-03	.1157	.7000	.4000
64	531.1	2.546	3.248E-03	.0830	3.903E-03	.0998	3.793E-03	.0969	.9000	.4000
65	536.0	3.883	4.986E-03	.1274	5.998E-03	.1533	5.549E-03	.1418	.1760	.5000
66	538.0	2.796	3.600E-03	.0920	4.334E-03	.1108	3.999E-03	.1022	.4840	.5000
82	536.0	2.781	3.571E-03	.0913	4.297E-03	.1098	4.034E-03	.1031	.7000	.5000
67	531.5	2.470	3.153E-03	.0806	3.789E-03	.0969	3.693E-03	.0944	.9000	.5000
68	540.4	5.058	6.532E-03	.1670	7.868E-03	.2011	7.259E-03	.1855	.1000	.6000
69	542.1	4.157	5.380E-03	.1375	6.483E-03	.1657	5.985E-03	.1530	.2000	.6000
70	544.0	3.716	4.821E-03	.1232	5.813E-03	.1486	5.347E-03	.1367	.4300	.6000
71	538.5	2.594	3.342E-03	.0854	4.023E-03	.1028	3.742E-03	.0957	.6000	.6000
72	534.9	2.090	2.679E-03	.0685	3.222E-03	.0823	3.080E-03	.0787	.8000	.6000
73	533.1	2.060	2.636E-03	.0674	3.169E-03	.0810	3.084E-03	.0788	.9000	.6000
74	551.9	7.081	9.282E-03	.2373	1.122E-02	.2867	1.031E-02	.2636	.1000	.7500
75	544.7	3.183	4.133E-03	.1057	4.984E-03	.1274	4.589E-03	.1173	.3000	.7500
76	544.5	2.890	3.752E-03	.0959	4.524E-03	.1156	4.177E-03	.1068	.5000	.7500
77	534.2	1.588	2.035E-03	.0520	2.447E-03	.0626	2.302E-03	.0588	.7000	.7500
78	536.9	2.290	2.945E-03	.0753	3.544E-03	.0906	3.444E-03	.0880	.9000	.7500
79	575.7	13.915	1.883E-02	.4813	2.290E-02	.5855	2.096E-02	.5357	.1000	.8500
80	560.0	7.923	1.050E-02	.2683	1.271E-02	.3249	1.167E-02	.2984	.3000	.8500
81	547.7	3.626	4.727E-03	.1208	5.705E-03	.1458	5.269E-03	.1347	.5000	.8500
83	543.2	8.976	1.194E-02	.3053	1.447E-02	.3700	1.325E-02	.3387	.1000	.9500
84	563.2	9.231	1.228E-02	.3139	1.489E-02	.3805	1.374E-02	.3512	.5000	.9500
85	553.0	6.112	8.022E-03	.2051	9.696E-03	.2478	9.391E-03	.2401	.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
10	1		7.97	423.7	1320	24.89	5.11	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.3	.044	1.978	3833	3.874E-05	7.755E-08	1.915E 06	3.463E-02	2.933E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	515.8	2.677	3.328E-03	.0961	3.982E-03	.1150	2.960E-03	.0855	.0050		0
4	562.1	13.258	1.749E-02	.5051	2.118E-02	.6117	1.810E-02	.5227	.0120		0
2	545.9	5.111	1.176E-02	.3397	1.418E-02	.4094	1.268E-02	.3660	.0200		0
3	531.7	5.302	6.726E-03	.1942	8.079E-03	.2333	7.527E-03	.2174	.0400		0
6	525.3	3.685	4.637E-03	.1339	5.561E-03	.1606	5.281E-03	.1525	.0600		0
7	521.9	2.927	3.667E-03	.1059	4.394E-03	.1269	4.232E-03	.1222	.0800		0
8	518.6	2.477	3.090E-03	.0892	3.700E-03	.1068	3.595E-03	.1038	.1000		0
10	511.8	1.703	2.107E-03	.0609	2.519E-03	.0727	2.474E-03	.0715	.1500	0	0
12	518.3	3.343	4.170E-03	.1204	4.992E-03	.1442	4.904E-03	.1416	.1500	30.0000	
13	513.8	2.409	2.988E-03	.0863	3.572E-03	.1032	3.509E-03	.1013	.1500	45.5000	
16	508.1	1.550	1.910E-03	.0551	2.280E-03	.0659	2.253E-03	.0651	.2000		0
17	511.0	2.221	2.746E-03	.0793	3.281E-03	.0948	3.242E-03	.0936	.2000		.1070
19	506.4	1.463	1.798E-03	.0519	2.146E-03	.0620	2.119E-03	.0612	.2250		0
20	500.8	1.434	1.750E-03	.0505	2.086E-03	.0602	2.069E-03	.0597	.2500		0
22	499.9	1.393	1.699E-03	.0491	2.025E-03	.0585	2.010E-03	.0580	.2750		0
23	499.5	1.363	1.661E-03	.0480	1.979E-03	.0572	1.965E-03	.0567	.3000	0	0
24	503.4	2.144	2.625E-03	.0758	3.131E-03	.0904	3.108E-03	.0898	.3000	34.0000	
25	504.8	2.416	2.963E-03	.0856	3.536E-03	.1021	3.510E-03	.1014	.3000	40.0000	
26	505.6	2.575	3.162E-03	.0913	3.774E-03	.1090	3.746E-03	.1082	.3000	45.0000	
29	499.8	1.284	1.565E-03	.0452	1.866E-03	.0539	1.852E-03	.0535	.3250		0
30	500.1	1.263	1.541E-03	.0445	1.836E-03	.0530	1.823E-03	.0526	.3500		0
31	500.7	1.176	1.435E-03	.0414	1.711E-03	.0494	1.698E-03	.0490	.4000		0
32	502.6	1.436	1.756E-03	.0507	2.095E-03	.0605	2.079E-03	.0600	.4000		.1070
33	502.6	1.190	1.345E-03	.0389	1.604E-03	.0463	1.593E-03	.0460	.4500		0
34	504.5	1.150	1.411E-03	.0407	1.683E-03	.0486	1.671E-03	.0483	.5000		0
35	505.6	1.175	1.442E-03	.0416	1.721E-03	.0497	1.709E-03	.0493	.5000		.1070
37	507.7	1.083	1.333E-03	.0385	1.592E-03	.0460	1.580E-03	.0456	.5500		0
38	511.3	1.027	1.270E-03	.0367	1.517E-03	.0438	1.506E-03	.0435	.6000		0
39	512.5	1.067	1.322E-03	.0382	1.580E-03	.0456	1.568E-03	.0453	.6000		.1070
40	514.9	.965	1.199E-03	.0346	1.434E-03	.0414	1.423E-03	.0411	.6500		0
41	518.8	.903	1.127E-03	.0326	1.350E-03	.0390	1.340E-03	.0387	.7000		0
43	521.7	.770	9.645E-04	.0279	1.156E-03	.0334	1.147E-03	.0331	.7500		0
44	524.1	.697	8.260E-04	.0239	9.902E-04	.0286	9.827E-04	.0284	.8000		0
45	524.9	.684	8.604E-04	.0248	1.032E-03	.0298	1.024E-03	.0296	.8000		.1070
46	526.0	.544	6.844E-04	.0198	8.214E-04	.0237	8.211E-04	.0237	.8500		0
47	526.4	.455	5.732E-04	.0166	6.879E-04	.0199	6.916E-04	.0200	.9000		0
48	526.9	.511	6.443E-04	.0186	7.729E-04	.0223	7.774E-04	.0225	.9000		.1070
49	526.9	.404	5.088E-04	.0147	6.104E-04	.0176	6.179E-04	.0178	.9500		0
50	527.0	.400	5.040E-04	.0146	6.046E-04	.0175	6.147E-04	.0178	1.0000		0
51	528.6	.776	9.806E-04	.0283	1.177E-03	.0340	1.197E-03	.0346	1.0000		.2140

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
10	1		7.97	423.7	1320	24.89	5.11	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.3	.044	1.978	3833	3.874E-05	7.755E-08	1.915E 06	3.463E-02	2.933E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	517.4	2.282	2.809E-03	.0811	3.353E-03	.0968	3.262E-03	.0942	.0820	.2500
53	510.8	1.864	2.304E-03	.0665	2.753E-03	.0795	2.714E-03	.0784	.3020	.2500
54	514.8	1.237	1.536E-03	.0444	1.837E-03	.0530	1.809E-03	.0523	.4470	.2500
55	521.0	.970	1.089E-03	.0314	1.304E-03	.0377	1.287E-03	.0372	.5910	.2500
56	527.2	.995	1.243E-03	.0359	1.491E-03	.0431	1.486E-03	.0429	.7360	.2500
57	529.2	.972	1.230E-03	.0355	1.476E-03	.0426	1.477E-03	.0426	.8810	.2500
58	534.7	5.731	7.298E-03	.2108	8.772E-03	.2533	8.355E-03	.2413	.0500	.4000
59	528.7	3.745	4.733E-03	.1367	5.681E-03	.1641	5.485E-03	.1584	.1000	.4000
60	527.0	2.441	3.079E-03	.0889	3.693E-03	.1067	3.585E-03	.1035	.2000	.4000
61	529.1	2.076	2.625E-03	.0758	3.151E-03	.0910	3.073E-03	.0888	.3000	.4000
62	532.8	1.589	2.019E-03	.0583	2.426E-03	.0701	2.386E-03	.0689	.5600	.4000
63	533.4	1.532	1.948E-03	.0563	2.341E-03	.0676	2.319E-03	.0670	.7000	.4000
64	531.1	.946	1.200E-03	.0346	1.441E-03	.0416	1.466E-03	.0423	.9000	.4000
65	538.0	3.497	4.472E-03	.1291	5.380E-03	.1554	5.248E-03	.1515	.1760	.5000
66	537.5	2.306	2.947E-03	.0851	3.545E-03	.1024	3.450E-03	.0996	.4840	.5000
82	537.9	2.134	2.729E-03	.0788	3.282E-03	.0948	3.244E-03	.0937	.7000	.5000
67	534.0	1.341	1.706E-03	.0493	2.050E-03	.0592	2.092E-03	.0604	.9000	.5000
68	536.5	3.278	4.184E-03	.1208	5.031E-03	.1453	4.899E-03	.1415	.1000	.6000
69	534.0	1.759	2.237E-03	.0646	2.689E-03	.0777	2.620E-03	.0757	.2000	.6000
70	536.2	1.465	1.868E-03	.0540	2.247E-03	.0649	2.183E-03	.0630	.4300	.6000
71	536.5	1.390	1.775E-03	.0513	2.134E-03	.0616	2.093E-03	.0604	.6000	.6000
72	535.7	1.115	1.422E-03	.0411	1.710E-03	.0494	1.717E-03	.0496	.8000	.6000
73	535.3	1.194	1.522E-03	.0439	1.830E-03	.0528	1.865E-03	.0539	.9000	.6000
74	554.6	6.949	9.079E-03	.2622	1.097E-02	.3168	1.065E-02	.3077	.1000	.7500
75	552.3	5.072	6.606E-03	.1908	7.978E-03	.2304	7.751E-03	.2238	.3000	.7500
76	544.1	2.684	3.459E-03	.0999	4.169E-03	.1204	4.062E-03	.1173	.5000	.7500
77	537.2	1.350	1.724E-03	.0498	2.074E-03	.0599	2.053E-03	.0593	.7000	.7500
78	539.7	1.559	1.998E-03	.0577	2.404E-03	.0694	2.448E-03	.0707	.9000	.7500
79	563.6	8.715	1.152E-02	.3327	1.396E-02	.4031	1.353E-02	.3907	.1000	.8500
80	546.0	3.324	4.295E-03	.1240	5.178E-03	.1495	5.029E-03	.1452	.3000	.8500
81	560.1	6.570	8.646E-03	.2497	1.046E-02	.3022	1.020E-02	.2944	.5000	.8500
83	559.3	6.044	7.945E-03	.2294	9.613E-03	.2776	9.310E-03	.2688	.1000	.9500
84	546.5	2.826	3.653E-03	.1055	4.405E-03	.1272	4.299E-03	.1241	.5000	.9500
85	547.1	3.076	3.980E-03	.1149	4.800E-03	.1386	4.878E-03	.1409	.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
11	1		7.97	426.4	1313	29.94	.06	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R=.0175ET)	STFR (R=.0175ET)	SWITCH POSITION
95.5	.045	1.990	5772	3.920E-05	7.713E-08	1.943E 06	3.471E-02	2.914E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	522.1	3.189	4.032E-03	.1162	4.835E-03	.1393	3.469E-03	.1000	.0050		0
4	585.0	13.829	1.900E-02	.5474	2.318E-02	.6679	1.905E-02	.5489	.0120		0
2	568.6	9.745	1.309E-02	.3773	1.590E-02	.4581	1.372E-02	.3953	.0200		0
3	553.7	5.479	7.743E-03	.2231	9.362E-03	.2698	8.450E-03	.2435	.0400		0
6	545.5	4.199	5.471E-03	.1576	6.600E-03	.1902	6.085E-03	.1753	.0600		0
7	540.0	3.454	4.468E-03	.1287	5.382E-03	.1551	5.041E-03	.1453	.0800		0
8	532.5	3.035	3.889E-03	.1121	4.676E-03	.1347	4.424E-03	.1275	.1000		0
10	518.0	2.295	2.888E-03	.0832	3.459E-03	.0997	3.314E-03	.0955	.1500	0	0
12	524.7	3.792	4.812E-03	.1386	5.773E-03	.1663	5.529E-03	.1593	.1500	30.0000	
13	518.9	2.545	3.206E-03	.0924	3.841E-03	.1107	3.680E-03	.1060	.1500	45.5000	
16	519.9	2.154	2.683E-03	.0773	3.207E-03	.0924	3.094E-03	.0891	.2000		0
17	513.2	2.678	3.349E-03	.0965	4.006E-03	.1154	3.864E-03	.1113	.2000		.1070
19	507.0	2.112	2.621E-03	.0755	3.131E-03	.0902	3.017E-03	.0869	.2250		0
20	498.6	2.038	2.503E-03	.0721	2.984E-03	.0860	2.891E-03	.0833	.2500		0
22	496.5	1.921	2.353E-03	.0678	2.803E-03	.0808	2.719E-03	.0783	.2750		0
23	495.2	1.891	2.313E-03	.0666	2.755E-03	.0794	2.672E-03	.0770	.3000	0	0
24	498.9	2.686	3.300E-03	.0951	3.934E-03	.1134	3.815E-03	.1099	.3000	34.0000	
25	501.1	2.894	3.565E-03	.1027	4.252E-03	.1225	4.124E-03	.1188	.3000	40.0000	
26	501.9	2.823	3.481E-03	.1003	4.153E-03	.1197	4.027E-03	.1160	.3000	45.0000	
29	494.8	1.847	2.257E-03	.0650	2.689E-03	.0775	2.608E-03	.0752	.3250		0
30	494.0	1.818	2.220E-03	.0640	2.643E-03	.0762	2.564E-03	.0739	.3500		0
31	493.7	1.668	2.036E-03	.0587	2.428E-03	.0699	2.352E-03	.0678	.4000		0
32	496.9	1.876	2.299E-03	.0662	2.739E-03	.0789	2.657E-03	.0766	.4000		.1070
33	496.7	1.599	1.959E-03	.0565	2.335E-03	.0673	2.269E-03	.0652	.4500		0
34	499.1	1.561	1.918E-03	.0553	2.287E-03	.0659	2.218E-03	.0639	.5000		0
35	501.4	1.540	1.897E-03	.0547	2.263E-03	.0652	2.195E-03	.0632	.5000		.1070
37	502.6	1.487	1.835E-03	.0529	2.190E-03	.0631	2.124E-03	.0612	.5500		0
38	506.1	1.465	1.816E-03	.0523	2.169E-03	.0625	2.103E-03	.0606	.6000		0
39	509.2	1.429	1.778E-03	.0512	2.125E-03	.0612	2.060E-03	.0594	.6000		.1070
40	509.9	1.376	1.714E-03	.0494	2.049E-03	.0590	1.986E-03	.0572	.6500		0
41	513.6	1.285	1.604E-03	.0463	1.924E-03	.0554	1.865E-03	.0537	.7000		0
43	517.5	1.199	1.504E-03	.0434	1.806E-03	.0520	1.750E-03	.0504	.7500		0
44	521.1	1.154	1.457E-03	.0420	1.747E-03	.0503	1.693E-03	.0488	.8000		0
45	522.5	1.106	1.399E-03	.0403	1.678E-03	.0484	1.626E-03	.0468	.8000		.1070
46	523.9	1.085	1.375E-03	.0396	1.649E-03	.0475	1.610E-03	.0464	.8500		0
47	524.6	.998	1.266E-03	.0365	1.519E-03	.0438	1.493E-03	.0430	.9000		0
48	525.6	.996	1.265E-03	.0364	1.518E-03	.0437	1.492E-03	.0430	.9000		.1070
49	524.6	.909	1.153E-03	.0332	1.383E-03	.0398	1.369E-03	.0394	.9500		0
50	523.5	1.093	1.385E-03	.0399	1.661E-03	.0479	1.652E-03	.0476	1.0000		0
51	526.4	1.489	1.893E-03	.0545	2.272E-03	.0655	2.259E-03	.0651	1.0000		.2140

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
11	1		7.97	426.4	1313	29.94	.06	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.8	.045	1.99[illegible]	3[illegible]22	3.920E-05	7.713E-0[illegible]	1.943E 06	3.471E-02	2.914E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	505.2	2.682	3.320E-03	.0957	3.964E-03	.1142	3.762E-03	.1084	.0820	.2500
53	509.6	2.175	2.708E-03	.0780	3.237E-03	.0933	3.115E-03	.0897	.3020	.2500
54	514.6	1.545	1.936E-03	.0558	2.317E-03	.0668	2.227E-03	.0642	.4470	.2500
55	519.5	1.104	1.392E-03	.0401	1.668E-03	.0480	1.606E-03	.0463	.5910	.2500
56	526.1	1.326	1.686E-03	.0486	2.023E-03	.0583	1.970E-03	.0568	.7360	.2500
57	528.2	1.470	1.873E-03	.0540	2.249E-03	.0648	2.197E-03	.0633	.8810	.2500
58	531.8	5.388	6.899E-03	.1988	8.293E-03	.2389	7.687E-03	.2215	.0500	.4000
59	526.6	3.794	4.825E-03	.1390	5.792E-03	.1669	5.448E-03	.1570	.1000	.4000
60	525.6	2.656	3.373E-03	.0972	4.049E-03	.1167	3.830E-03	.1103	.2000	.4000
61	528.6	2.390	2.938E-03	.0845	3.523E-03	.1015	3.349E-03	.0965	.3000	.4000
62	531.9	1.948	2.367E-03	.0682	2.845E-03	.0820	2.729E-03	.0786	.5600	.4000
63	531.8	1.949	2.495E-03	.0719	2.999E-03	.0864	2.898E-03	.0835	.7000	.4000
64	525.4	1.369	1.739E-03	.0501	2.087E-03	.0601	2.078E-03	.0599	.9000	.4000
65	526.6	3.570	4.599E-03	.1325	5.535E-03	.1595	5.261E-03	.1516	.1760	.5000
66	526.6	2.316	2.983E-03	.0860	3.591E-03	.1035	3.405E-03	.0981	.4840	.5000
82	534.9	2.114	2.717E-03	.0783	3.268E-03	.0942	3.150E-03	.0908	.7000	.5000
67	527.2	1.722	2.192E-03	.0632	2.631E-03	.0758	2.626E-03	.0757	.9000	.5000
68	537.9	4.299	5.547E-03	.1598	6.678E-03	.1924	6.334E-03	.1825	.1000	.6000
69	539.8	3.277	4.239E-03	.1221	5.106E-03	.1471	4.845E-03	.1396	.2000	.6000
70	541.3	2.710	3.512E-03	.1012	4.233E-03	.1220	4.004E-03	.1154	.4300	.6000
71	536.3	1.776	2.287E-03	.0659	2.752E-03	.0793	2.630E-03	.0758	.6000	.6000
72	531.3	1.356	1.735E-03	.0500	2.085E-03	.0601	2.045E-03	.0589	.8000	.6000
73	528.1	1.453	1.852E-03	.0534	2.224E-03	.0641	2.218E-03	.0639	.9000	.6000
74	559.0	8.454	1.121E-02	.3231	1.358E-02	.3912	1.283E-02	.3697	.1000	.7500
75	543.1	3.919	3.922E-03	.1130	4.729E-03	.1363	4.476E-03	.1290	.3000	.7500
76	542.7	2.557	3.321E-03	.0957	4.003E-03	.1153	3.800E-03	.1095	.5000	.7500
77	533.5	1.444	1.853E-03	.0534	2.228E-03	.0642	2.152E-03	.0620	.7000	.7500
78	533.9	1.863	2.391E-03	.0689	2.876E-03	.0829	2.864E-03	.0825	.9000	.7500
79	562.8	9.357	1.247E-02	.3594	1.512E-02	.4357	1.426E-02	.4109	.1000	.8500
80	567.5	9.219	1.237E-02	.3564	1.501E-02	.4326	1.417F-02	.4083	.3000	.8500
81	567.5	9.126	1.224E-02	.3528	1.486E-02	.4282	1.409E-02	.4059	.5000	.8500
83	553.4	5.685	7.486E-03	.2157	9.051E-03	.2608	8.533E-03	.2459	.1000	.9500
84	553.3	5.699	7.502E-03	.2162	9.070E-03	.2613	8.617E-03	.2483	.5000	.9500
85	550.1	5.679	7.445E-03	.2145	8.994E-03	.2591	8.933E-03	.2574	.9000	.9500

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VA352-21HA

GROUP	CONFIG	MODEL	MACH NO	P0,PSIA	T0,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREHEND	ROLL MODEL	YAW
12	1		7.97	425.6	1294	34.98	-4.98	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.7	.045	1.986	3801	3.956E-05	7.628E-08	1.971E 06	3.461E-02	2.89AE-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STC)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	528.5	3.652	4.743E-03	.1371	5.705E-03	.1649	3.944E-03	.1140	.0050		0
4	531.5	19.873	1.962E-02	.5670	2.404E-02	.6946	1.902E-02	.5497	.0120		0
2	576.5	10.084	1.347E-02	.4036	1.703E-02	.4922	1.418E-02	.4099	.0200		0
3	562.4	6.242	8.535E-03	.2466	1.036E-02	.2994	9.051E-03	.2615	.0400		0
6	554.5	4.636	6.232E-03	.1801	7.549E-03	.2181	6.745E-03	.1949	.0600		0
7	548.7	3.840	5.121E-03	.1480	6.194E-03	.1790	5.629E-03	.1627	.0800		0
8	540.7	3.371	4.450E-03	.1286	5.370E-03	.1552	4.935E-03	.1426	.1000		0
10	534.9	2.718	3.514E-03	.1015	4.222E-03	.1220	3.936E-03	.1137	.1500	0	0
12	530.7	4.209	5.483E-03	.1584	6.599E-03	.1907	6.148E-03	.1777	.1500	30.0000	
13	523.1	2.574	3.320E-03	.0959	3.988E-03	.1152	3.714E-03	.1075	.1500	45.5000	
16	515.2	2.597	3.303E-03	.0955	3.960E-03	.1144	3.720E-03	.1075	.2000		0
17	518.0	3.138	4.020E-03	.1162	4.823E-03	.1394	4.529E-03	.1309	.2000		.1070
19	511.6	2.505	3.183E-03	.0920	3.813E-03	.1102	3.587E-03	.1034	.2250		0
20	510.0	2.471	3.094E-03	.0894	3.695E-03	.1068	3.490E-03	.1008	.2500		0
22	498.2	2.311	2.884E-03	.0835	3.448E-03	.0996	3.261E-03	.0942	.2750		0
23	496.8	2.220	2.770E-03	.0800	3.305E-03	.0955	3.126E-03	.0903	.3000	0	0
24	500.6	3.012	3.776E-03	.1091	4.510E-03	.1303	4.264E-03	.1232	.3000	34.0000	
25	502.8	3.271	4.111E-03	.1188	4.912E-03	.1419	4.643E-03	.1342	.3000	40.0000	
26	503.8	3.197	4.024E-03	.1163	4.810E-03	.1390	4.546E-03	.1314	.3000	45.0000	
29	496.5	2.212	2.758E-03	.0797	3.291E-03	.0951	3.113E-03	.0899	.3250		0
30	496.0	2.199	2.741E-03	.0792	3.270E-03	.0945	3.093E-03	.0894	.3500		0
31	496.3	2.046	2.551E-03	.0737	3.043E-03	.0879	2.878E-03	.0832	.4000		0
32	499.0	2.210	2.765E-03	.0799	3.301E-03	.0954	3.122E-03	.0902	.4000		.1070
33	498.9	1.977	2.473E-03	.0715	2.953E-03	.0853	2.792E-03	.0807	.4500		0
34	501.1	1.903	2.386E-03	.0689	2.850E-03	.0824	2.695E-03	.0779	.5000		0
35	502.8	1.777	2.233E-03	.0645	2.669E-03	.0771	2.523E-03	.0729	.5000		.1070
37	504.7	1.820	2.293E-03	.0663	2.742E-03	.0792	2.591E-03	.0749	.5500		0
38	508.2	1.790	2.265E-03	.0654	2.710E-03	.0783	2.561E-03	.0740	.6000		0
39	510.7	1.691	2.147E-03	.0621	2.571E-03	.0743	2.429E-03	.0702	.6000		.1070
40	512.0	1.699	2.161E-03	.0624	2.588E-03	.0748	2.445E-03	.0706	.6500		0
41	514.1	1.649	2.101E-03	.0609	2.528E-03	.0730	2.387E-03	.0690	.7000		0
43	520.0	1.589	2.041E-03	.0590	2.450E-03	.0708	2.312E-03	.0668	.7500		0
44	524.1	1.685	2.150E-03	.0621	2.583E-03	.0747	2.438E-03	.0704	.8000		0
45	524.8	1.546	1.998E-03	.0577	2.401E-03	.0694	2.265E-03	.0655	.8000		.1070
46	527.2	1.613	2.092E-03	.0604	2.515E-03	.0727	2.373E-03	.0691	.8500		0
47	528.2	1.689	2.192E-03	.0634	2.637E-03	.0762	2.527E-03	.0730	.9000		0
48	528.3	1.630	2.117E-03	.0612	2.546E-03	.0736	2.440E-03	.0705	.9000		.1070
49	528.8	1.712	2.225E-03	.0643	2.677E-03	.0773	2.584E-03	.0747	.9500		0
50	528.6	2.048	2.713E-03	.0784	3.263E-03	.0943	3.166E-03	.0915	1.0000		0
51	530.5	2.372	3.089E-03	.0893	3.718E-03	.1074	3.607E-03	.1042	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
12	1		7.97	425.6	1298	34.98	-4.98	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (H= .0175FT)	SWITCH POSITION
94.7	.0045	1.986	3881	3.956E-05	7.628E-08	1.971E 06	3.461E-02	2.898E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	515.1	2.824	3.560E-03	.1029	4.257E-03	.1230	3.933E-03	.1136	.0820	.2500
53	518.7	2.448	3.100E-03	.0896	3.710E-03	.1072	3.478E-03	.1005	.3020	.2500
54	514.5	1.758	2.243E-03	.0648	2.689E-03	.0777	2.517E-03	.0727	.4470	.2500
55	520.7	1.352	1.739E-03	.0502	2.087E-03	.0603	1.957E-03	.0565	.5910	.2500
56	528.1	1.715	2.226E-03	.0643	2.677E-03	.0774	2.539E-03	.0734	.7360	.2500
57	530.8	2.180	2.840E-03	.0821	3.419E-03	.0988	3.254E-03	.0940	.8810	.2500
58	530.5	5.036	6.558E-03	.1895	7.892E-03	.2281	7.108E-03	.2054	.0500	.4000
59	527.0	3.792	4.916E-03	.1421	5.911E-03	.1708	5.405E-03	.1562	.1000	.4000
60	526.6	2.735	3.544E-03	.1024	4.261E-03	.1231	3.919E-03	.1133	.2000	.4000
61	528.9	2.377	3.090E-03	.0893	3.717E-03	.1074	3.437E-03	.0993	.3000	.4000
62	533.0	2.078	2.714E-03	.0784	3.269E-03	.0945	3.051E-03	.0882	.5600	.4000
63	532.8	2.230	2.921E-03	.0844	3.518E-03	.1016	3.309E-03	.0956	.7000	.4000
64	527.8	1.717	2.228E-03	.0644	2.680E-03	.0774	2.604E-03	.0752	.9000	.4000
65	536.3	3.531	4.632E-03	.1339	5.584E-03	.1613	5.162E-03	.1492	.1760	.5000
66	537.1	2.398	3.150E-03	.0910	3.797E-03	.1097	3.501E-03	.1012	.4840	.5000
82	534.5	2.174	2.847E-03	.0823	3.430E-03	.0991	3.218E-03	.0930	.7000	.5000
67	529.0	1.942	2.524E-03	.0729	3.036E-03	.0877	2.958E-03	.0855	.9000	.5000
68	542.5	5.092	6.736E-03	.1947	8.133E-03	.2350	7.496E-03	.2166	.1000	.6000
69	542.0	3.812	5.040E-03	.1456	6.084E-03	.1758	5.612E-03	.1622	.2000	.6000
70	543.7	3.352	4.442E-03	.1284	5.365E-03	.1550	4.931E-03	.1425	.4300	.6000
71	537.6	2.307	3.032E-03	.0876	3.656E-03	.1056	3.399E-03	.0982	.6000	.6000
72	532.4	1.730	2.259E-03	.0653	2.720E-03	.0786	2.599E-03	.0751	.8000	.6000
73	531.1	1.802	2.349E-03	.0679	2.828E-03	.0817	2.752E-03	.0795	.9000	.6000
74	554.6	7.281	9.790E-03	.2829	1.186E-02	.3427	1.089E-02	.3147	.1000	.7500
75	543.7	3.016	3.997E-03	.1155	4.827E-03	.1395	4.441E-03	.1283	.3000	.7500
76	543.1	2.730	3.614E-03	.1044	4.364E-03	.1261	4.027E-03	.1164	.5000	.7500
77	533.5	1.605	2.099E-03	.0607	2.528E-03	.0731	2.377E-03	.0687	.7000	.7500
78	534.7	2.162	2.832E-03	.0818	3.411E-03	.0986	3.215E-03	.0958	.9000	.7500
79	574.8	11.743	1.623E-02	.4689	1.978E-02	.5715	1.808E-02	.5224	.1000	.8500
80	557.1	6.566	8.858E-03	.2560	1.074E-02	.3103	9.856E-03	.2848	.3000	.8500
81	546.2	3.594	4.778E-03	.1381	5.775E-03	.1669	5.330E-03	.1540	.5000	.8500
83	562.7	7.631	1.037E-02	.2997	1.259E-02	.3639	1.152E-02	.3329	.1000	.9500
84	562.0	7.575	1.029E-02	.2972	1.249E-02	.3609	1.152E-02	.3328	.5000	.9500
85	549.0	4.697	6.268E-03	.1811	7.581E-03	.2191	7.342E-03	.2122	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-21BA

NRCUR	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
13	1		7.96	323.7	1281	24.88	5.12	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	U-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
93.7	.034	1.519	3775	3.067E-05	7.543E-08	1.535E 06	3.019E-02	3.286E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	520.7	2.145	2.821E-03	.0934	3.392E-03	.1124	2.501E-03	.0828	.0050		0
4	550.7	10.955	1.521E-02	.5037	1.850E-02	.6126	1.575E-02	.5215	.0120		0
2	546.9	7.507	1.022E-02	.3386	1.239E-02	.4102	1.104E-02	.3656	.0200		0
3	535.6	4.360	5.849E-03	.1937	7.063E-03	.2339	6.566E-03	.2174	.0400		0
6	530.2	2.974	3.961E-03	.1312	4.775E-03	.1582	4.527E-03	.1499	.0600		0
7	527.3	2.361	3.132E-03	.1037	3.774E-03	.1250	3.630E-03	.1202	.0800		0
8	524.3	1.999	2.642E-03	.0875	3.180E-03	.1053	3.087E-03	.1022	.1000		0
10	517.7	1.365	1.789E-03	.0592	2.150E-03	.0712	2.111E-03	.0699	.1500	0	0
12	522.7	2.699	3.545E-03	.1174	4.266E-03	.1413	4.188E-03	.1387	.1500	30.0000	
13	518.9	1.938	2.543E-03	.0842	3.057E-03	.1013	3.002E-03	.0994	.1500	45.5000	
16	513.8	1.222	1.593E-03	.0528	1.912E-03	.0633	1.889E-03	.0626	.2000		0
17	516.0	1.786	2.335E-03	.0773	2.804E-03	.0929	2.770E-03	.0917	.2000		.1070
19	512.0	1.164	1.514E-03	.0501	1.816E-03	.0601	1.792E-03	.0593	.2250		0
20	515.9	1.131	1.469E-03	.0483	1.768E-03	.0579	1.733E-03	.0574	.2500		0
22	514.8	1.082	1.395E-03	.0462	1.670E-03	.0553	1.658E-03	.0549	.2750		0
23	514.1	1.052	1.354E-03	.0448	1.621E-03	.0537	1.609E-03	.0533	.3000	0	0
24	517.5	1.731	2.238E-03	.0741	2.683E-03	.0888	2.662E-03	.0882	.3000	34.0000	
25	518.5	1.936	2.506E-03	.0830	3.005E-03	.0995	2.982E-03	.0988	.3000	40.0000	
26	519.2	2.054	2.661E-03	.0881	3.191E-03	.1057	3.167E-03	.1049	.3000	45.0000	
29	513.9	1.035	1.332E-03	.0441	1.595E-03	.0528	1.583E-03	.0524	.3250		0
30	513.9	1.014	1.305E-03	.0432	1.563E-03	.0518	1.551E-03	.0514	.3500		0
31	513.6	.926	1.191E-03	.0395	1.426E-03	.0472	1.416E-03	.0469	.4000		0
32	515.3	1.133	1.461E-03	.0484	1.750E-03	.0580	1.737E-03	.0575	.4000		.1070
33	514.6	.909	1.171E-03	.0388	1.403E-03	.0465	1.392E-03	.0461	.4500		0
34	515.6	.895	1.154E-03	.0382	1.383E-03	.0458	1.372E-03	.0455	.5000		0
35	516.3	.946	1.221E-03	.0404	1.463E-03	.0484	1.452E-03	.0481	.5000		.1070
37	517.7	.862	1.114E-03	.0369	1.335E-03	.0442	1.325E-03	.0439	.5500		0
38	510.2	.825	1.070E-03	.0355	1.284E-03	.0425	1.274E-03	.0422	.6000		0
39	511.0	.853	1.108E-03	.0367	1.329E-03	.0440	1.319E-03	.0437	.6000		.1070
40	512.7	.776	1.010E-03	.0334	1.212E-03	.0401	1.203E-03	.0398	.6500		0
41	515.6	.695	9.074E-04	.0301	1.090E-03	.0361	1.081E-03	.0358	.7000		0
43	517.7	.596	7.805E-04	.0259	9.380E-04	.0311	9.308E-04	.0308	.7500		0
44	519.9	.516	6.769E-04	.0224	8.138E-04	.0270	8.076E-04	.0267	.8000		0
45	519.8	.538	7.065E-04	.0234	8.495E-04	.0281	8.430E-04	.0279	.8000		.1070
46	520.6	.395	5.197E-04	.0172	6.250E-04	.0207	6.248E-04	.0207	.8500		0
47	520.8	.310	4.081E-04	.0135	4.908E-04	.0163	4.938E-04	.0164	.9000		0
48	521.2	.342	4.502E-04	.0149	5.415E-04	.0179	5.447E-04	.0180	.9000		.1070
49	521.2	.195	2.562E-04	.0085	3.081E-04	.0102	3.120E-04	.0103	.9500		0
50	520.9	.174	2.285E-04	.0076	2.748E-04	.0091	2.794E-04	.0093	1.0000		0
51	522.0	.532	7.006E-04	.0232	8.428E-04	.0279	8.571E-04	.0284	1.0000		.2140

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
13	1		7.96	323.7	1291	24.88	5.12	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
93.7	.034	1.519	3775	3.067E-05	7.543E-08	1.535E 06	3.019E-02	3.246E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	519.4	1.852	2.400E-03	.0795	2.878E-03	.0953	2.798E-03	.0927	.0820	.2500
53	510.8	1.486	1.929E-03	.0639	2.314E-03	.0766	2.280E-03	.0755	.3020	.2500
54	512.7	1.047	1.363E-03	.0451	1.636E-03	.0542	1.611E-03	.0534	.4470	.2500
55	516.4	.695	9.095E-04	.0301	1.093E-03	.0362	1.074E-03	.0357	.5910	.2500
56	521.0	.728	9.570E-04	.0317	1.152E-03	.0382	1.148E-03	.0380	.7360	.2500
57	522.5	.723	9.533E-04	.0316	1.147E-03	.0380	1.147E-03	.0380	.8810	.2500
58	529.1	4.725	6.284E-03	.2081	7.575E-03	.2509	7.208E-03	.2387	.0500	.4000
59	523.8	3.137	4.143E-03	.1372	4.987E-03	.1652	4.812E-03	.1594	.1000	.4000
60	521.2	1.991	2.620E-03	.0868	3.151E-03	.1044	3.057E-03	.1013	.2000	.4000
61	522.3	1.739	2.293E-03	.0759	2.758E-03	.0914	2.689E-03	.0891	.3000	.4000
62	524.5	1.302	1.721E-03	.0570	2.072E-03	.0686	2.038E-03	.0675	.5600	.4000
63	524.8	1.249	1.652E-03	.0547	1.989E-03	.0659	1.970E-03	.0652	.7000	.4000
64	523.0	.726	9.571E-04	.0317	1.152E-03	.0381	1.173E-03	.0388	.9000	.4000
65	529.1	2.896	3.851E-03	.1275	4.641E-03	.1537	4.526E-03	.1499	.1760	.5000
66	527.2	1.844	2.446E-03	.0810	2.946E-03	.0976	2.867E-03	.0950	.4840	.5000
82	527.5	1.730	2.296E-03	.0760	2.766E-03	.0916	2.734E-03	.0905	.7000	.5000
67	524.4	1.063	1.404E-03	.0465	1.691E-03	.0560	1.725E-03	.0571	.9000	.5000
68	526.9	2.668	3.537E-03	.1172	4.261E-03	.1411	4.148E-03	.1374	.1000	.6000
69	524.0	1.445	1.909E-03	.0632	2.298E-03	.0761	2.238E-03	.0741	.2000	.6000
70	525.3	1.273	1.684E-03	.0558	2.028E-03	.0672	1.970E-03	.0652	.4300	.6000
71	525.3	1.201	1.590E-03	.0527	1.914E-03	.0634	1.877E-03	.0622	.6000	.6000
72	524.5	.928	1.227E-03	.0406	1.477E-03	.0489	1.483E-03	.0491	.8000	.6000
73	524.3	.898	1.186E-03	.0393	1.428E-03	.0473	1.456E-03	.0482	.9000	.6000
74	539.5	5.628	7.590E-03	.2514	9.175E-03	.3039	8.910E-03	.2951	.1000	.7500
75	532.2	3.034	4.051E-03	.1342	4.887E-03	.1619	4.749E-03	.1573	.3000	.7500
76	529.2	2.115	2.813E-03	.0932	3.391E-03	.1123	3.304E-03	.1094	.5000	.7500
77	523.6	1.035	1.367E-03	.0453	1.645E-03	.0545	1.628E-03	.0539	.7000	.7500
78	525.7	1.293	1.699E-03	.0563	2.046E-03	.0678	2.083E-03	.0690	.9000	.7500
79	546.2	7.263	9.884E-03	.3273	1.197E-02	.3965	1.160E-02	.3843	.1000	.8500
80	530.4	3.653	3.534E-03	.1170	4.261E-03	.1411	4.138E-03	.1371	.3000	.8500
81	540.7	5.039	6.806E-03	.2254	8.229E-03	.2726	8.020E-03	.2656	.5000	.8500
83	541.0	5.011	6.772E-03	.2243	8.190E-03	.2712	7.932E-03	.2627	.1000	.9500
84	530.2	2.298	3.060E-03	.1014	3.690E-03	.1222	3.601E-03	.1193	.5000	.9500
85	528.7	2.138	2.842E-03	.0941	3.425E-03	.1134	3.481E-03	.1153	.9000	.9500

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21dA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
14	1		7.96	327.6	1296	29.94	.06	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (H= .0175FT)	SWITCH POSITION
94.8	.035	1.53	3798	3.067E-05	7.634E-08	1.526E 06	3.044E-02	3.290E-02	1

GAGE	Tw	CDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	519.2	2.690	3.461E-03	.1137	4.154E-03	.1365	2.976E-03	.0978	.0050		0
4	569.2	12.049	1.657E-02	.5443	2.016E-02	.6624	1.661E-02	.5457	.0120		0
2	555.3	8.458	1.141E-02	.3749	1.383E-02	.4544	1.195E-02	.3927	.0200		0
3	543.8	5.103	6.781E-03	.2228	8.192E-03	.2691	7.398E-03	.2430	.0400		0
6	537.6	3.645	4.803E-03	.1578	5.792E-03	.1903	5.341E-03	.1754	.0600		0
7	532.7	2.993	3.919E-03	.1288	4.721E-03	.1551	4.422E-03	.1453	.0800		0
8	526.2	2.633	3.419E-03	.1123	4.110E-03	.1350	3.889E-03	.1278	.1000		0
10	514.4	1.954	2.499E-03	.0821	2.996E-03	.0984	2.870E-03	.0943	.1500	0	0
12	522.1	3.221	4.160E-03	.1367	4.996E-03	.1641	4.784E-03	.1572	.1500	30.0000	
13	517.8	2.151	2.763E-03	.0908	3.315E-03	.1089	3.175E-03	.1043	.1500	45.5000	
16	508.4	1.847	2.344E-03	.0770	2.806E-03	.0922	2.706E-03	.0889	.2000		0
17	513.2	2.316	2.957E-03	.0972	3.544E-03	.1164	3.417E-03	.1122	.2000		.1070
19	506.3	1.781	2.254E-03	.0740	2.696E-03	.0886	2.597E-03	.0853	.2250		0
20	499.4	1.688	2.118E-03	.0696	2.529E-03	.0831	2.449E-03	.0805	.2500		0
22	498.3	1.600	2.004E-03	.0658	2.393E-03	.0786	2.320E-03	.0762	.2750		0
23	497.5	1.571	1.966E-03	.0646	2.347E-03	.0771	2.275E-03	.0747	.3000	0	0
24	500.8	2.237	2.812E-03	.0924	3.359E-03	.1103	3.256E-03	.1070	.3000	34.0000	
25	502.9	2.448	3.085E-03	.1013	3.697E-03	.1211	3.574E-03	.1174	.3000	40.0000	
26	504.5	2.445	3.087E-03	.1014	3.691E-03	.1213	3.578E-03	.1175	.3000	45.0000	
29	497.1	1.521	1.903E-03	.0625	2.271E-03	.0746	2.202E-03	.0723	.3250		0
30	496.6	1.490	1.863E-03	.0612	2.224E-03	.0731	2.156E-03	.0708	.3500		0
31	497.0	1.374	1.719E-03	.0565	2.052E-03	.0674	1.989E-03	.0654	.4000		0
32	500.2	1.549	1.945E-03	.0639	2.323E-03	.0763	2.252E-03	.0740	.4000		.1070
33	499.5	1.320	1.656E-03	.0544	1.978E-03	.0650	1.917E-03	.0630	.4500		0
34	501.4	1.328	1.670E-03	.0549	1.996E-03	.0656	1.935E-03	.0636	.5000		0
35	503.5	1.264	1.594E-03	.0524	1.905E-03	.0626	1.847E-03	.0607	.5000		.1070
37	504.3	1.252	1.581E-03	.0519	1.890E-03	.0621	1.832E-03	.0602	.5500		0
38	507.0	1.228	1.556E-03	.0511	1.861E-03	.0611	1.804E-03	.0593	.6000		0
39	509.4	1.181	1.500E-03	.0493	1.796E-03	.0590	1.741E-03	.0572	.6000		.1070
40	510.1	1.138	1.435E-03	.0471	1.718E-03	.0564	1.665E-03	.0547	.6500		0
41	513.2	1.043	1.331E-03	.0437	1.595E-03	.0524	1.545E-03	.0508	.7000		0
43	516.1	.933	1.196E-03	.0393	1.434E-03	.0471	1.389E-03	.0456	.7500		0
44	518.6	.840	1.080E-03	.0355	1.296E-03	.0426	1.256E-03	.0412	.8000		0
45	519.3	.775	9.969E-04	.0328	1.197E-03	.0393	1.159E-03	.0381	.8000		.1070
46	520.3	.669	8.674E-04	.0292	1.065E-03	.0350	1.040E-03	.0342	.8500		0
47	520.8	.588	7.585E-04	.0249	9.108E-04	.0299	8.951E-04	.0294	.9000		0
48	521.1	.616	7.942E-04	.0261	9.536E-04	.0313	9.372E-04	.0308	.9000		.1070
49	520.7	.467	6.016E-04	.0198	7.223E-04	.0237	7.150E-04	.0235	.9500		0
50	519.4	.521	6.694E-04	.0220	8.040E-04	.0264	7.995E-04	.0263	1.0000		0
51	521.5	.852	1.100E-03	.0361	1.321E-03	.0434	1.313E-03	.0431	1.0000		.2140

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
14	1		7.96	327.6	1296	29.94	.06	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.8	.035	1.538	3798	3.067E-05	7.634E-08	1.526E 06	3.044E-02	3.290E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STG)	H(STG)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	506.9	2.265	2.868E-03	.0942	3.432E-03	.1127	3.254E-03	.1069	.0820	.2500
53	518.8	1.835	2.330E-03	.0765	2.789E-03	.0916	2.682E-03	.0881	.3020	.2500
54	513.3	1.295	1.654E-03	.0543	1.982E-03	.0651	1.905E-03	.0626	.4470	.2500
55	517.6	.911	1.170E-03	.0384	1.404E-03	.0461	1.351E-03	.0444	.5910	.2500
56	521.9	1.020	1.317E-03	.0433	1.581E-03	.0520	1.539E-03	.0506	.7360	.2500
57	523.0	1.024	1.323E-03	.0435	1.590E-03	.0522	1.553E-03	.0510	.8810	.2500
58	529.3	4.653	6.065E-03	.1993	7.299E-03	.2398	6.763E-03	.2222	.0500	.4000
59	525.2	3.298	4.276E-03	.1405	5.139E-03	.1688	4.832E-03	.1587	.1000	.4000
60	524.5	2.232	2.892E-03	.0950	3.476E-03	.1142	3.286E-03	.1080	.2000	.4000
61	526.3	1.924	2.498E-03	.0821	3.003E-03	.0987	2.854E-03	.0938	.3000	.4000
62	527.2	1.513	1.967E-03	.0646	2.366E-03	.0777	2.269E-03	.0746	.5600	.4000
63	526.6	1.527	1.984E-03	.0652	2.385E-03	.0784	2.305E-03	.0757	.7000	.4000
64	521.5	.982	1.267E-03	.0416	1.522E-03	.0500	1.515E-03	.0498	.9000	.4000
65	533.9	3.029	3.972E-03	.1305	4.785E-03	.1572	4.547E-03	.1494	.1760	.5000
66	532.1	1.979	2.589E-03	.0851	3.118E-03	.1024	2.956E-03	.0971	.4840	.5000
82	529.3	1.701	2.218E-03	.0729	2.669E-03	.0877	2.573E-03	.0845	.7000	.5000
67	523.2	1.379	1.783E-03	.0586	2.142E-03	.0704	2.138E-03	.0702	.9000	.5000
68	536.1	3.668	4.745E-03	.1559	5.721E-03	.1879	5.424E-03	.1782	.1000	.6000
69	536.7	2.749	3.619E-03	.1189	4.363E-03	.1433	4.140E-03	.1360	.2000	.6000
70	536.9	2.296	3.022E-03	.0993	3.644E-03	.1197	3.446E-03	.1132	.4300	.6000
71	531.0	1.936	2.506E-03	.0659	2.415E-03	.0793	2.308E-03	.0758	.6000	.6000
72	526.3	1.127	1.463E-03	.0481	1.759E-03	.0578	1.725E-03	.0567	.8000	.6000
73	524.5	1.151	1.491E-03	.0490	1.792E-03	.0589	1.787E-03	.0587	.9000	.6000
74	548.6	5.975	7.996E-03	.2625	9.665E-03	.3175	9.136E-03	.3001	.1000	.7500
75	539.8	2.520	3.331E-03	.1094	4.020E-03	.1321	3.804E-03	.1250	.3000	.7500
76	538.0	2.114	2.787E-03	.0916	3.362E-03	.1104	3.191E-03	.1048	.5000	.7500
77	538.7	1.156	1.508E-03	.0495	1.812E-03	.0595	1.749E-03	.0575	.7000	.7500
78	538.0	1.502	1.955E-03	.0642	2.352E-03	.0773	2.342E-03	.0769	.9000	.7500
79	567.5	7.791	1.054E-02	.3463	1.279E-02	.4200	1.206E-02	.3961	.1000	.8500
80	557.9	6.889	9.328E-03	.3064	1.131E-02	.3717	1.068E-02	.3509	.3000	.8500
81	554.4	6.429	8.663E-03	.2846	1.050E-02	.3449	9.956E-03	.3271	.5000	.8500
83	549.2	4.813	6.441E-03	.2116	7.793E-03	.2560	7.346E-03	.2413	.1000	.9500
84	545.1	4.190	5.574E-03	.1832	6.739E-03	.2214	6.403E-03	.2104	.5000	.9500
85	543.7	4.442	5.901E-03	.1939	7.128E-03	.2342	7.080E-03	.2326	.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	P0,PSIA	T0,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
15	1		7.96	326.5	1313	35.00	-5.00	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.0	.035	1.532	3822	3.019E-05	7.731E-08	1.493E 06	3.045E-02	3.321E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	521.1	3.289	4.155E-03	.1364	4.981E-03	.1636	3.464E-03	.1138	.0050		0
4	567.4	12.825	1.721E-02	.5650	2.088E-02	.6858	1.670E-02	.5484	.0120		0
2	553.3	9.300	1.224E-02	.4021	1.480E-02	.4861	1.243E-02	.4080	.0200		0
3	541.0	5.800	7.515E-03	.2468	9.055E-03	.2973	7.951E-03	.2611	.0400		0
6	534.7	4.249	5.461E-03	.1793	6.569E-03	.2157	5.894E-03	.1935	.0600		0
7	530.8	3.509	4.487E-03	.1474	5.393E-03	.1771	4.917E-03	.1615	.0800		0
8	526.3	3.101	3.943E-03	.1295	4.733E-03	.1554	4.360E-03	.1432	.1000		0
10	517.3	2.457	3.088E-03	.1014	3.698E-03	.1214	3.452E-03	.1134	.1500	0	0
12	523.4	3.776	4.783E-03	.1571	5.737E-03	.1884	5.352E-03	.1757	.1500	30.0000	
13	516.7	2.299	2.888E-03	.0948	3.459E-03	.1136	3.229E-03	.1060	.1500	45.5000	
16	511.9	2.321	2.898E-03	.0951	3.466E-03	.1138	3.258E-03	.1070	.2000		0
17	515.0	2.795	3.504E-03	.1150	4.194E-03	.1377	3.941E-03	.1294	.2000		.1070
19	509.4	2.208	2.749E-03	.0903	3.286E-03	.1079	3.085E-03	.1013	.2250		0
20	499.4	2.159	2.655E-03	.0872	3.165E-03	.1039	2.990E-03	.0982	.2500		0
22	498.2	2.044	2.509E-03	.0824	2.991E-03	.0982	2.829E-03	.0929	.2750		0
23	497.6	1.990	2.441E-03	.0802	2.910E-03	.0956	2.753E-03	.0904	.3000	0	0
24	501.7	2.661	3.280E-03	.1077	3.913E-03	.1285	3.701E-03	.1215	.3000	34.0000	
25	503.3	2.881	3.559E-03	.1169	4.248E-03	.1395	4.017E-03	.1319	.3000	40.0000	
26	504.1	2.833	3.503E-03	.1150	4.182E-03	.1373	3.954E-03	.1298	.3000	45.0000	
29	498.0	1.943	2.384E-03	.0783	2.842E-03	.0933	2.689E-03	.0883	.3250		0
30	497.9	1.920	2.356E-03	.0774	2.808E-03	.0922	2.656E-03	.0872	.3500		0
31	498.6	1.766	2.169E-03	.0712	2.585E-03	.0849	2.446E-03	.0803	.4000		0
32	501.1	1.941	2.391E-03	.0785	2.853E-03	.0937	2.699E-03	.0886	.4000		.1070
33	500.7	1.720	2.118E-03	.0696	2.527E-03	.0830	2.390E-03	.0785	.4500		0
34	502.5	1.650	2.036E-03	.0668	2.429E-03	.0798	2.297E-03	.0754	.5000		0
35	504.1	1.583	1.957E-03	.0643	2.336E-03	.0767	2.209E-03	.0725	.5000		.1070
37	505.7	1.562	1.935E-03	.0635	2.311E-03	.0759	2.185E-03	.0717	.5500		0
38	508.8	1.519	1.889E-03	.0620	2.258E-03	.0741	2.134E-03	.0701	.6000		0
39	510.5	1.483	1.849E-03	.0607	2.210E-03	.0726	2.088E-03	.0686	.6000		.1070
40	511.9	1.443	1.802E-03	.0592	2.155E-03	.0708	2.037E-03	.0669	.6500		0
41	515.0	1.346	1.688E-03	.0554	2.020E-03	.0663	1.908E-03	.0627	.7000		0
43	517.7	1.220	1.535E-03	.0504	1.839E-03	.0604	1.737E-03	.0570	.7500		0
44	520.1	1.151	1.445E-03	.0481	1.755E-03	.0576	1.658E-03	.0544	.8000		0
45	520.6	1.049	1.374E-03	.0451	1.647E-03	.0541	1.555E-03	.0511	.8000		.1070
46	520.7	1.471	1.857E-03	.0610	2.226E-03	.0731	2.120E-03	.0696	.8500		0
47	521.6	.904	1.143E-03	.0375	1.371E-03	.0450	1.314E-03	.0432	.9000		0
48	521.7	.888	1.123E-03	.0369	1.346E-03	.0442	1.291E-03	.0424	.9000		.1070
49	521.9	.785	9.915E-04	.0326	1.189E-03	.0390	1.140E-03	.0377	.9500		0
50	520.6	.936	1.182E-03	.0388	1.417E-03	.0465	1.376E-03	.0452	1.0000		0
51	522.6	1.273	1.610E-03	.0529	1.931E-03	.0634	1.875E-03	.0616	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	P0,PSIA	T0,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
15	1		7.96	326.5	1313	35.00	-5.00	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.0	.035	1.532	3922	3.019E-05	7.731E-08	1.493E 06	3.045E-02	3.321F-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STG)	H(STG)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	516.2	2.549	3.209E-03	.1054	3.833E-03	.1259	3.542E-03	.1163	.0820	.2500
53	518.4	2.177	2.708E-03	.0888	3.233E-03	.1062	3.033E-03	.0996	.3020	.2500
54	512.8	1.592	1.977E-03	.0649	2.365E-03	.0777	2.216E-03	.0728	.4470	.2500
55	517.6	1.144	1.434E-03	.0472	1.723E-03	.0566	1.617E-03	.0531	.5910	.2500
56	522.7	1.277	1.616E-03	.0531	1.938E-03	.0636	1.839E-03	.0604	.7360	.2500
57	523.7	1.345	1.705E-03	.0560	2.045E-03	.0672	1.949E-03	.0640	.8810	.2500
58	527.6	4.600	5.85?E-03	.1924	7.034E-03	.2310	6.343E-03	.2083	.0500	.2500
59	523.9	3.339	4.232E-03	.1390	5.076E-03	.1667	4.647E-03	.1526	.1000	.4000
60	523.2	2.437	3.086E-03	.1013	3.702E-03	.1216	3.409E-03	.1119	.2000	.4000
61	524.5	2.130	2.703E-03	.0887	3.243E-03	.1065	3.002F-03	.0986	.3000	.4000
62	527.0	1.706	2.171E-03	.0713	2.606E-03	.0856	2.435E-03	.0800	.5600	.4000
63	526.7	1.780	2.265E-03	.0744	2.719E-03	.0893	2.561E-03	.0841	.7000	.4000
64	523.2	1.232	1.548E-03	.0508	1.857E-03	.0610	1.705E-03	.0593	.9000	.4000
65	531.4	3.193	4.086E-03	.1342	4.911E-03	.1613	4.545E-03	.1493	.1760	.4000
66	530.6	2.163	2.765E-03	.0908	3.322E-03	.1091	3.067E-03	.1007	.4840	.5000
67	528.4	1.810	2.308E-03	.0758	2.772E-03	.0910	2.604E-03	.0855	.7000	.5000
68	525.1	1.562	1.983E-03	.0651	2.379E-03	.0781	2.319E-03	.0761	.9000	.5000
69	537.2	4.587	5.913E-03	.1942	7.118E-03	.2337	6.569F-03	.2157	.1000	.6000
70	535.7	3.428	4.411E-03	.1448	5.308E-03	.1743	4.903F-03	.1610	.2000	.6000
71	536.0	3.039	3.912E-03	.1284	4.707E-03	.1546	4.334F-03	.1423	.4300	.6000
72	527.4	2.069	2.644E-03	.0869	3.180E-03	.1044	2.960E-03	.0972	.6000	.6000
73	527.0	1.474	1.876E-03	.0616	2.253E-03	.0740	2.193E-03	.0720	.8000	.6000
74	547.5	8.564	8.577E-03	.2817	1.035E-02	.3400	9.524E-03	.3127	.9000	.6000
75	535.7	3.712	3.496E-03	.1146	4.199E-03	.1379	3.870E-03	.1271	.1000	.7500
76	535.3	3.433	3.129E-03	.1027	3.765E-03	.1236	3.480E-03	.1143	.3000	.7500
77	528.0	1.428	1.819E-03	.0597	2.184E-03	.0717	2.056E-03	.0675	.5000	.7500
78	529.5	1.772	2.262E-03	.0743	2.717E-03	.0892	2.541F-03	.0867	.7000	.7500
79	556.6	8.402	1.111E-02	.3649	1.345E-02	.4415	1.233E-02	.4049	.9000	.7500
80	543.7	4.036	6.02?E-03	.1980	7.269E-03	.2387	6.688F-03	.2196	.1000	.8500
81	537.9	3.073	3.966E-03	.1302	4.775E-03	.1568	4.415E-03	.1450	.3000	.8500
82	550.8	6.048	7.938E-03	.2607	9.590E-03	.3149	8.793E-03	.2887	.5000	.8500
83	550.9	6.037	7.924E-03	.2602	9.573E-03	.3144	8.?47E-03	.2905	.1000	.9500
84	539.3	3.279	4.234E-03	.1392	5.105E-03	.1676	4.948F-03	.1625	.5000	.9500
85									.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-2184

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
16	1		7.94	208.2	1248	24.92	5.08	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175ET)	STFR (R= .0175ET)	SWITCH POSITION
91.7	.022	.988	3726	2.048E-05	7.385E-08	1.033E 06	2.424E-02	4.011E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	512.8	1.594	2.168E-03	.0894	2.611E-03	.1077	1.920E-03	.0792	.0050		0
4	541.7	8.561	1.212E-02	.4998	1.472E-02	.6070	1.254E-02	.5173	.0120		0
2	530.5	5.817	8.104E-03	.3343	9.810E-03	.4047	8.746E-03	.3608	.0200		0
3	521.7	3.376	4.646E-03	.1916	5.610E-03	.2314	5.214E-03	.2151	.0400		0
6	517.5	2.281	3.121E-03	.1287	3.764E-03	.1553	3.568E-03	.1472	.0600		0
7	515.3	1.749	2.385E-03	.0984	2.975E-03	.1186	2.765E-03	.1141	.0800		0
8	513.7	1.473	2.005E-03	.0827	2.416E-03	.0996	2.344E-03	.0967	.1000		0
10	510.3	1.033	1.400E-03	.0577	1.685E-03	.0695	1.654E-03	.0682	.1500	0	0
12	514.3	1.981	2.698E-03	.1113	3.251E-03	.1341	3.191E-03	.1316	.1500	30.0000	
13	511.7	1.447	1.964E-03	.0810	2.365E-03	.0975	2.321E-03	.0957	.1500	45.5000	
16	508.5	.909	1.229E-03	.0507	1.479E-03	.0610	1.460E-03	.0602	.2000		
17	510.2	1.303	1.765E-03	.0728	2.125E-03	.0876	2.098E-03	.0865	.2000		0
19	507.7	.874	1.180E-03	.0487	1.419E-03	.0585	1.399E-03	.0577	.2250		.1070
20	505.2	.840	1.130E-03	.0466	1.358E-03	.0560	1.346E-03	.0555	.2500		0
22	504.5	.800	1.076E-03	.0444	1.292E-03	.0533	1.282E-03	.0529	.2750		0
23	504.1	.778	1.045E-03	.0431	1.255E-03	.0518	1.246E-03	.0514	.3000		0
24	506.8	1.262	1.701E-03	.0702	2.046E-03	.0844	2.030E-03	.0837	.3000	0	0
25	507.5	1.436	1.938E-03	.0799	2.331E-03	.0961	2.313E-03	.0954	.3000	34.0000	
26	507.9	1.543	2.084E-03	.0860	2.507E-03	.1034	2.487E-03	.1026	.3000	40.0000	
29	504.5	.771	1.036E-03	.0427	1.245E-03	.0513	1.235E-03	.0509	.3250	45.0000	
30	504.4	.759	1.021E-03	.0421	1.226E-03	.0506	1.217E-03	.0502	.3500		0
31	504.3	.698	9.384E-04	.0387	1.128E-03	.0465	1.119E-03	.0461	.4000		0
32	505.5	.832	1.120E-03	.0462	1.346E-03	.0555	1.335E-03	.0551	.4000		0
33	505.4	.665	8.950E-04	.0369	1.076E-03	.0444	1.067E-03	.0440	.4500		.1070
34	506.0	.654	8.807E-04	.0363	1.059E-03	.0437	1.050E-03	.0433	.5000		0
35	506.6	.657	8.856E-04	.0365	1.065E-03	.0439	1.057E-03	.0436	.5000		0
37	507.9	.627	8.473E-04	.0349	1.019E-03	.0420	1.011E-03	.0417	.5500		.1070
38	510.1	.604	8.188E-04	.0338	9.854E-04	.0406	9.777E-04	.0403	.6000		0
39	511.0	.619	8.389E-04	.0346	1.010E-03	.0417	1.002E-03	.0413	.6000		0
40	512.4	.559	7.600E-04	.0313	9.152E-04	.0378	9.080E-04	.0375	.6500		.1070
41	514.9	.492	6.706E-04	.0277	8.081E-04	.0333	8.017E-04	.0331	.7000		0
43	516.7	.430	5.882E-04	.0243	7.092E-04	.0293	7.035E-04	.0290	.7500		0
44	518.3	.350	4.790E-04	.0198	5.778E-04	.0238	5.733E-04	.0236	.8000		0
45	518.8	.352	4.829E-04	.0199	5.826E-04	.0240	5.779E-04	.0238	.8000		.1070
46	519.1	.376	5.151E-04	.0212	6.215E-04	.0256	6.212E-04	.0256	.8500		0
47	519.3	.201	2.751E-04	.0113	3.320E-04	.0137	3.340E-04	.0138	.9000		0
48	519.2	.246	3.379E-04	.0139	4.078E-04	.0168	4.102E-04	.0169	.9000		.1070
49	519.0	.106	1.456E-04	.0060	1.756E-04	.0072	1.779E-04	.0073	.9500		0
50	519.4	.082	1.128E-04	.0047	1.361E-04	.0056	1.384E-04	.0057	1.0000		0
51	520.5	.294	4.046E-04	.0167	4.884E-04	.0201	4.967E-04	.0205	1.0000		.2140

11/12/73

AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
16	1		7.94	208.2	1248	24.92	5.08	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
91.7	.022	.588	3726	2.048E-05	7.385E-08	1.033E 06	2.424E-02	4.011E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	508.5	1.378	1.862E-03	.0768	2.240E-03	.0924	2.177E-03	.0898	.0820	.2500
53	509.8	1.067	1.444E-03	.0596	1.738E-03	.0717	1.712E-03	.0706	.3020	.2500
54	512.6	.740	1.005E-03	.0415	1.211E-03	.0499	1.192E-03	.0492	.4470	.2500
55	516.1	.498	6.671E-04	.0275	8.041E-04	.0332	7.930E-04	.0327	.5910	.2500
56	519.8	.570	7.819E-04	.0323	9.436E-04	.0389	9.405E-04	.0388	.7360	.2500
57	520.9	.476	6.537E-04	.0270	7.891E-04	.0325	7.892E-04	.0326	.8810	.2500
58	525.5	3.624	5.014E-03	.2068	6.061E-03	.2500	5.762E-03	.2377	.0500	.4000
59	521.1	2.247	3.090E-03	.1274	3.730E-03	.1539	3.596E-03	.1483	.1000	.4000
60	519.9	1.488	2.043E-03	.0843	2.465E-03	.1017	2.390E-03	.0986	.2000	.4000
61	521.3	1.254	1.725E-03	.0711	2.082E-03	.0859	2.029E-03	.0837	.3000	.4000
62	523.7	.955	1.318E-03	.0544	1.592E-03	.0657	1.565E-03	.0646	.5600	.4000
63	523.9	.899	1.241E-03	.0512	1.499E-03	.0618	1.484E-03	.0612	.7000	.4000
64	522.6	.525	7.234E-04	.0298	8.737E-04	.0360	8.897E-04	.0367	.9000	.4000
65	527.0	2.140	2.967E-03	.1224	3.588E-03	.1480	3.497E-03	.1443	.1760	.5000
66	526.1	1.373	1.901E-03	.0784	2.298E-03	.0948	2.235E-03	.0922	.4840	.5000
82	526.7	1.275	1.767E-03	.0729	2.137E-03	.0882	2.111E-03	.0871	.7000	.5000
67	524.4	.732	1.012E-03	.0417	1.223E-03	.0504	1.248E-03	.0515	.9000	.5000
68	526.2	1.967	2.724E-03	.1124	3.293E-03	.1358	3.203E-03	.1321	.1000	.6000
69	524.3	1.102	1.521E-03	.0628	1.838E-03	.0758	1.789E-03	.0738	.2000	.6000
70	525.8	1.043	1.443E-03	.0595	1.745E-03	.0720	1.693E-03	.0698	.4300	.6000
71	526.5	.905	1.254E-03	.0517	1.516E-03	.0625	1.485E-03	.0613	.6000	.6000
72	525.6	.694	9.597E-04	.0396	1.160E-03	.0479	1.165E-03	.0480	.8000	.6000
73	524.7	.620	8.562E-04	.0353	1.035E-03	.0427	1.055E-03	.0435	.9000	.6000
74	537.1	4.199	5.903E-03	.2435	7.159E-03	.2953	6.947E-03	.2866	.1000	.7500
75	528.1	1.356	1.883E-03	.0777	2.278E-03	.0940	2.212E-03	.0912	.3000	.7500
76	529.7	1.491	2.075E-03	.0856	2.511E-03	.1036	2.446E-03	.1009	.5000	.7500
77	526.0	.696	9.634E-04	.0397	1.165E-03	.0480	1.153E-03	.0475	.7000	.7500
78	527.5	.860	1.193E-03	.0492	1.443E-03	.0595	1.470E-03	.0606	.9000	.7500
79	543.4	5.529	7.644E-03	.3235	9.631E-03	.3932	9.232E-03	.3808	.1000	.8500
80	531.5	1.923	2.683E-03	.1107	3.248E-03	.1340	3.152E-03	.1300	.3000	.8500
81	534.7	2.579	3.614E-03	.1491	4.380E-03	.1807	4.266E-03	.1760	.5000	.8500
83	540.1	3.732	5.270E-03	.2174	6.398E-03	.2639	6.191E-03	.2554	.1000	.9500
84	532.5	1.729	2.415E-03	.0996	2.925E-03	.1207	2.853E-03	.1177	.5000	.9500
85	530.0	1.251	1.742E-03	.0718	2.108E-03	.0870	2.143E-03	.0884	.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
17	1		7.94	209.4	1242	29.88	.12	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
91.3	.023	.994	3717	2.071E-05	7.348E-08	1.047E 06	2.429E-02	3.987E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	ZY/B
1	512.6	1.942	2.662E-03	.1096	3.208E-03	.1321	2.283E-03	.0940	.0050		0
4	550.7	8.979	1.299E-02	.5347	1.583E-02	.6518	1.303E-02	.5364	.0120		0
2	539.7	6.247	8.953E-03	.3685	1.088E-02	.4477	9.385E-03	.3863	.0200		0
3	530.5	3.786	5.322E-03	.2191	6.447E-03	.2654	5.815E-03	.2394	.0400		0
6	525.6	2.696	3.763E-03	.1549	4.553E-03	.1874	4.193E-03	.1726	.0600		0
7	521.6	2.198	3.051E-03	.1256	3.687E-03	.1518	3.450E-03	.1420	.0800		0
8	516.9	1.908	2.631E-03	.1083	3.175E-03	.1307	3.001E-03	.1235	.1000		0
10	518.9	1.379	1.882E-03	.0775	2.266E-03	.0933	2.169E-03	.0893	.1500	0	0
12	514.6	2.317	3.185E-03	.1311	3.841E-03	.1581	3.675E-03	.1513	.1500	30.0000	
13	511.4	1.532	2.097E-03	.0863	2.527E-03	.1040	2.418E-03	.0996	.1500	45.5000	
16	514.9	1.318	1.788E-03	.0736	2.150E-03	.0885	2.072E-03	.0853	.2000		0
17	508.4	1.658	2.261E-03	.0931	2.721E-03	.1120	2.622E-03	.1079	.2000		.1070
19	503.4	1.255	1.699E-03	.0700	2.043E-03	.0841	1.966E-03	.0809	.2250		0
20	500.0	1.163	1.568E-03	.0645	1.883E-03	.0775	1.822E-03	.0750	.2500		0
22	499.1	1.121	1.509E-03	.0621	1.812E-03	.0746	1.756E-03	.0723	.2750		0
23	498.7	1.090	1.467E-03	.0604	1.761E-03	.0725	1.706E-03	.0702	.3000	0	0
24	501.0	1.589	2.145E-03	.0883	2.577E-03	.1061	2.496E-03	.1028	.3000	34.0000	
25	502.6	1.743	2.358E-03	.0971	2.834E-03	.1167	2.745E-03	.1130	.3000	40.0000	
26	503.7	1.779	2.410E-03	.0992	2.897E-03	.1193	2.806E-03	.1155	.3000	45.0000	
29	499.9	1.050	1.413E-03	.0582	1.696E-03	.0698	1.644E-03	.0677	.3250		0
30	498.6	1.037	1.395E-03	.0574	1.674E-03	.0689	1.622E-03	.0668	.3500		0
31	499.1	.952	1.282E-03	.0528	1.539E-03	.0633	1.491E-03	.0614	.4000		0
32	501.7	1.096	1.481E-03	.0610	1.779E-03	.0732	1.723E-03	.0709	.4000		.1070
33	501.5	.928	1.253E-03	.0516	1.506E-03	.0620	1.459E-03	.0601	.4500		0
34	502.9	.909	1.229E-03	.0506	1.478E-03	.0608	1.431E-03	.0589	.5000		0
35	504.6	.921	1.249E-03	.0514	1.501E-03	.0618	1.454E-03	.0599	.5000		.1070
37	505.5	.905	1.224E-03	.0506	1.477E-03	.0608	1.431E-03	.0589	.5500		0
38	507.9	.860	1.172E-03	.0482	1.411E-03	.0581	1.366E-03	.0562	.6000		0
39	509.8	.827	1.130E-03	.0465	1.361E-03	.0560	1.318E-03	.0542	.6000		.1070
40	510.6	.786	1.075E-03	.0443	1.295E-03	.0533	1.254E-03	.0516	.6500		0
41	513.4	.726	9.958E-04	.0410	1.200E-03	.0494	1.162E-03	.0478	.7000		0
43	515.7	.524	8.598E-04	.0354	1.037E-03	.0427	1.004E-03	.0413	.7500		0
44	517.7	.528	7.287E-04	.0300	8.795E-04	.0362	8.512E-04	.0350	.8000		0
45	518.4	.483	6.672E-04	.0275	8.055E-04	.0332	7.796E-04	.0321	.8000		.1070
46	518.9	.479	6.620E-04	.0273	7.993E-04	.0329	7.799E-04	.0321	.8500		0
47	519.3	.356	4.921E-04	.0203	5.942E-04	.0245	5.838E-04	.0240	.9000		0
48	519.9	.350	4.840E-04	.0199	5.846E-04	.0241	5.744E-04	.0236	.9000		.1070
49	518.9	.250	3.463E-04	.0143	4.181E-04	.0172	4.138E-04	.0170	.9500		0
50	518.1	.241	3.330E-04	.0137	4.020E-04	.0165	3.998E-04	.0165	1.0000		0
51	520.0	.456	6.290E-04	.0259	7.597E-04	.0313	7.555E-04	.0311	1.0000		.2140

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PJ,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
17	1		7.94	209.4	1242	29.88	.12	30.00	180	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (H= .0175FT)	SWITCH POSITION
91.3	.023	.994	3717	2.071E-05	7.348E-08	1.047E 06	2.429E-02	3.947E-02	1

GAGE	TW	TOOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	506.8	1.615	2.196E-03	.0904	2.643E-03	.1088	2.502E-03	.1030	.0820	.2500
53	509.7	1.296	1.770E-03	.0728	2.131E-03	.0877	2.048E-03	.0843	.3020	.2500
54	513.7	.916	1.257E-03	.0518	1.516E-03	.0624	1.455E-03	.0599	.4470	.2500
55	517.3	.636	8.772E-04	.0361	1.059E-03	.0436	1.018E-03	.0419	.5910	.2500
56	520.9	.639	8.865E-04	.0365	1.071E-03	.0441	1.042E-03	.0429	.7360	.2500
57	521.3	.595	8.257E-04	.0340	9.977E-04	.0411	9.741E-04	.0401	.8810	.2500
58	526.0	3.409	4.762E-03	.1960	5.761E-03	.2372	5.327E-03	.2193	.0500	.4000
59	523.2	2.337	3.251E-03	.1338	3.930E-03	.1618	3.689E-03	.1519	.1000	.4000
60	523.4	1.611	2.242E-03	.0923	2.710E-03	.1116	2.558E-03	.1053	.2000	.4000
61	525.4	1.343	1.875E-03	.0772	2.269E-03	.0934	2.152E-03	.0886	.3000	.4000
62	526.3	1.019	1.424E-03	.0586	1.723E-03	.0709	1.651E-03	.0680	.5600	.4000
63	525.5	1.055	1.473E-03	.0606	1.781E-03	.0733	1.720E-03	.0708	.7000	.4000
64	521.3	.650	9.015E-04	.0371	1.089E-03	.0448	1.084E-03	.0446	.9000	.4000
65	532.6	2.131	3.004E-03	.1236	3.641E-03	.1499	3.455E-03	.1422	.1760	.5000
66	530.5	1.389	1.953E-03	.0804	2.366E-03	.0974	2.240E-03	.0922	.4840	.5000
67	528.4	1.244	1.744E-03	.0718	2.112E-03	.0869	2.033E-03	.0837	.7000	.5000
68	523.2	.960	1.336E-03	.0550	1.615E-03	.0665	1.613E-03	.0664	.9000	.5000
69	535.1	2.593	3.668E-03	.1510	4.450E-03	.1832	4.212E-03	.1734	.1000	.6000
70	535.5	1.959	2.772E-03	.1141	3.364E-03	.1385	3.186E-03	.1312	.2000	.6000
71	535.1	1.638	2.318E-03	.0954	2.812E-03	.1158	2.655E-03	.1093	.4300	.6000
72	531.0	.933	1.313E-03	.0540	1.591E-03	.0655	1.518E-03	.0625	.6000	.6000
73	526.5	.776	1.084E-03	.0446	1.312E-03	.0540	1.286E-03	.0529	.8000	.6000
74	524.1	.780	1.086E-03	.0447	1.313E-03	.0541	1.310E-03	.0539	.9000	.6000
75	544.3	4.133	5.924E-03	.2439	7.207E-03	.2967	6.802E-03	.2800	.1000	.7500
76	538.9	1.741	2.476E-03	.1019	3.007E-03	.1238	2.840E-03	.1169	.3000	.7500
77	536.3	1.458	2.067E-03	.0851	2.508E-03	.1033	2.377E-03	.0979	.5000	.7500
78	529.0	.762	1.068E-03	.0440	1.293E-03	.0532	1.248E-03	.0514	.7000	.7500
79	538.9	.985	1.381E-03	.0569	1.672E-03	.0689	1.666E-03	.0686	.9000	.7500
80	552.3	6.624	8.154E-03	.3357	9.945E-03	.4094	9.363E-03	.3854	.1000	.8500
81	544.1	2.924	4.190E-03	.1725	5.097E-03	.2098	4.809E-03	.1980	.3000	.8500
82	542.4	2.914	4.165E-03	.1714	5.064E-03	.2085	4.799E-03	.1976	.5000	.8500
83	546.2	3.457	4.968E-03	.2045	6.047E-03	.2489	5.691E-03	.2343	.1000	.9500
84	538.9	2.141	3.045E-03	.1253	3.698E-03	.1522	3.510E-03	.1445	.5000	.9500
85	538.1	2.731	3.880E-03	.1597	4.711E-03	.1940	4.680E-03	.1927	.9000	.9500

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
18	1		7.94	211.3	1238	34.92	-4.92	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (H= .0175FT)	SWITCH POSITION
91.0	.023	1.00?	3711	2.096E-05	7.325E-08	1.062E 06	2.439E-02	3.962E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	513.5	2.311	3.189E-03	.1308	3.847E-03	.1577	2.647E-03	.1085	.0050		0
4	554.3	9.263	1.354E-02	.5553	1.654E-02	.6781	1.314E-02	.5389	.0120		0
2	543.7	6.652	9.579E-03	.3927	1.166E-02	.4780	9.730E-03	.3989	.0200		0
3	534.4	4.114	5.845E-03	.2397	7.093E-03	.2908	6.200E-03	.2542	.0400		0
6	529.1	3.012	4.247E-03	.1741	5.145E-03	.2110	4.599E-03	.1885	.0600		0
7	525.1	2.525	3.541E-03	.1452	4.285E-03	.1757	3.894E-03	.1597	.0800		0
8	519.5	2.237	3.113E-03	.1276	3.761E-03	.1542	3.456E-03	.1417	.1000		0
10	509.8	1.754	2.408E-03	.0987	2.901E-03	.1190	2.703E-03	.1108	.1500	0	0
12	515.7	2.675	3.703E-03	.1518	4.469E-03	.1832	4.160E-03	.1706	.1500	30.0000	
13	511.5	1.573	2.164E-03	.0887	2.608E-03	.1069	2.429E-03	.0996	.1500	45.5000	
16	515.2	1.642	2.240E-03	.0918	2.695E-03	.1105	2.529E-03	.1037	.2000		0
17	508.6	2.006	2.750E-03	.1127	3.312E-03	.1358	3.106E-03	.1274	.2000		.1070
19	513.2	1.564	2.129E-03	.0873	2.560E-03	.1050	2.399E-03	.0984	.2250		0
20	497.0	1.504	2.029E-03	.0832	2.436E-03	.0999	2.297E-03	.0942	.2500		0
22	496.2	1.414	1.906E-03	.0781	2.288E-03	.0938	2.160E-03	.0886	.2750		0
23	495.8	1.399	1.885E-03	.0773	2.262E-03	.0928	2.136E-03	.0876	.3000	0	0
24	498.8	1.891	2.558E-03	.1049	3.073E-03	.1260	2.901E-03	.1189	.3000	34.0000	
25	500.4	2.034	2.757E-03	.1130	3.313E-03	.1358	3.127E-03	.1282	.3000	40.0000	
26	501.6	2.013	2.733E-03	.1121	3.285E-03	.1347	3.101E-03	.1271	.3000	45.0000	
29	496.0	1.364	1.837E-03	.0753	2.205E-03	.0904	2.082E-03	.0854	.3250		0
30	495.9	1.356	1.827E-03	.0749	2.193E-03	.0899	2.071E-03	.0849	.3500		0
31	496.7	1.216	1.640E-03	.0672	1.969E-03	.0807	1.859E-03	.0762	.4000		0
32	499.5	1.317	1.783E-03	.0731	2.142E-03	.0878	2.022E-03	.0829	.4000		.1070
33	499.3	1.118	1.513E-03	.0620	1.817E-03	.0745	1.715E-03	.0703	.4500		0
34	501.4	1.141	1.548E-03	.0635	1.861E-03	.0763	1.756E-03	.0720	.5000		0
35	503.4	1.071	1.458E-03	.0598	1.754E-03	.0719	1.655E-03	.0678	.5000		.1070
37	504.1	1.040	1.444E-03	.0592	1.737E-03	.0712	1.639E-03	.0672	.5500		0
38	507.2	1.055	1.443E-03	.0592	1.737E-03	.0712	1.639E-03	.0672	.6000		0
39	509.6	1.017	1.395E-03	.0572	1.681E-03	.0689	1.585E-03	.0650	.6000		.1070
40	510.3	.978	1.344E-03	.0551	1.619E-03	.0664	1.527E-03	.0626	.6500		0
41	513.2	.874	1.205E-03	.0494	1.453E-03	.0596	1.370E-03	.0562	.7000		0
43	515.7	.776	1.073E-03	.0440	1.295E-03	.0531	1.221E-03	.0501	.7500		0
44	517.9	.734	1.019E-03	.0418	1.231E-03	.0505	1.160E-03	.0476	.8000		0
45	518.9	.645	9.243E-04	.0379	1.116E-03	.0458	1.052E-03	.0431	.8000		.1070
46	519.3	.577	8.020E-04	.0329	9.688E-04	.0397	9.208E-04	.0378	.8500		0
47	519.6	.493	6.860E-04	.0281	8.288E-04	.0340	7.935E-04	.0325	.9000		0
48	520.1	.479	6.677E-04	.0274	8.068E-04	.0331	7.725E-04	.0317	.9000		.1070
49	519.5	.353	4.914E-04	.0201	5.937E-04	.0243	5.730E-04	.0235	.9500		0
50	518.2	.340	4.721E-04	.0194	5.701E-04	.0234	5.531E-04	.0227	1.0000		0
51	519.9	.584	8.126E-04	.0333	9.919E-04	.0403	9.524E-04	.0391	1.0000		.2140

11/12/73

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V4352-2184

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
18	1		7.94	211.3	1238	34.92	-4.92	30.00	180	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
91.0	.023	1.003	3711	2.096E-05	7.325E-08	1.062E 06	2.439E-02	3.962E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	524.8	1.465	2.543E-03	.1043	3.059E-03	.1254	2.819E-03	.1156	.0820	.2500
53	518.7	1.699	2.329E-03	.0955	2.805E-03	.1150	2.624E-03	.1076	.3020	.2500
54	513.2	1.082	1.492E-03	.0612	1.800E-03	.0738	1.681E-03	.0689	.4470	.2500
55	517.8	.758	1.053E-03	.0432	1.271E-03	.0521	1.190E-03	.0488	.5910	.2500
56	521.4	.741	1.034E-03	.0424	1.250E-03	.0512	1.184E-03	.0485	.7340	.2500
57	521.8	.771	1.076E-03	.0441	1.301E-03	.0533	1.237E-03	.0507	.8810	.2500
58	524.6	3.305	4.631E-03	.1899	5.603E-03	.2297	5.032E-03	.2063	.0500	.4000
59	522.4	2.352	3.286E-03	.1347	3.974E-03	.1629	3.625E-03	.1486	.1000	.4000
60	523.0	1.649	2.306E-03	.0945	2.789E-03	.1143	2.559E-03	.1049	.2000	.4000
61	525.5	1.439	2.019E-03	.0828	2.443E-03	.1002	2.254E-03	.0924	.3000	.4000
62	527.3	1.190	1.674E-03	.0686	2.027E-03	.0831	1.889E-03	.0775	.5600	.4000
63	526.0	1.169	1.641E-03	.0673	1.986E-03	.0814	1.866E-03	.0765	.7000	.4000
64	521.4	.753	1.051E-03	.0431	1.270E-03	.0521	1.233E-03	.0506	.9000	.4000
65	521.9	2.217	3.138E-03	.1287	3.805E-03	.1560	3.509E-03	.1439	.1760	.5000
66	522.0	1.464	2.073E-03	.0850	2.514E-03	.1031	2.312E-03	.0948	.4840	.5000
67	523.4	1.018	1.424E-03	.0707	2.088E-03	.0856	1.956E-03	.0802	.7000	.5000
68	526.5	3.207	4.570E-03	.1874	5.549E-03	.2275	5.103E-03	.2092	.9000	.5000
69	526.6	2.359	3.362E-03	.1378	4.083E-03	.1674	3.758E-03	.1541	.1000	.6000
70	527.9	2.076	2.965E-03	.1216	3.601E-03	.1477	3.302E-03	.1354	.2000	.6000
71	522.3	1.419	2.010E-03	.0824	2.438E-03	.0999	2.262E-03	.0927	.4300	.6000
72	527.3	1.003	1.411E-03	.0578	1.708E-03	.0700	1.631E-03	.0669	.6000	.6000
73	525.6	.950	1.334E-03	.0547	1.614E-03	.0662	1.570E-03	.0644	.8000	.6000
74	545.8	4.660	6.644E-03	.2724	8.091E-03	.3318	7.416E-03	.3040	.9000	.6000
75	538.7	1.832	2.619E-03	.1074	3.183E-03	.1305	2.921E-03	.1198	.1000	.7500
76	537.5	1.637	2.336E-03	.0958	2.837E-03	.1163	2.613E-03	.1071	.3000	.7500
77	529.7	.899	1.269E-03	.0520	1.538E-03	.0630	1.443E-03	.0592	.5000	.7500
78	529.0	1.136	1.602E-03	.0657	1.941E-03	.0796	1.804E-03	.0773	.7000	.7500
79	550.2	5.157	7.496E-03	.3073	9.141E-03	.3748	8.357E-03	.3426	.9000	.7500
80	542.2	3.612	5.753E-03	.1539	4.565E-03	.1872	4.185E-03	.1716	.1000	.8500
81	538.9	2.018	2.886E-03	.1183	3.507E-03	.1438	3.230E-03	.1324	.3000	.8500
83	545.5	3.317	4.788E-03	.1963	5.830E-03	.2390	5.324E-03	.2184	.5000	.8500
84	544.1	3.258	4.693E-03	.1924	5.712E-03	.2342	5.264E-03	.2158	.1000	.9500
85	535.4	1.589	2.262E-03	.0927	2.745E-03	.1126	2.658E-03	.1090	.5000	.9500
									.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
32	1		8.00	861.6	1358	30.11	.11	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (H= .0175FT)	SWITCH POSITION
98.4	.088	3.954	3888	7.526E-05	7.921E-08	3.694E 06	4.921E-02	2.111E-02	1

GAGE	TW	GDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	542.8	4.312	5.290E-03	.1075	6.348E-03	.1290	4.360E-03	.0886	.0050		0
4	590.9	20.022	2.610E-02	.5304	3.171E-02	.6445	2.613E-02	.5310	.0120		0
2	569.2	13.104	1.661E-02	.3376	2.007E-02	.4078	1.751E-02	.3558	.0200		0
3	554.5	8.266	1.029E-02	.2090	1.238E-02	.2516	1.135E-02	.2306	.0400		0
6	548.1	6.063	7.487E-03	.1521	8.995E-03	.1828	8.434E-03	.1714	.0600		0
7	544.5	4.949	6.084E-03	.1236	7.303E-03	.1484	6.961E-03	.1415	.0800		0
8	543.6	4.424	5.432E-03	.1104	6.519E-03	.1325	6.276E-03	.1275	.1000		0
10	539.6	3.105	3.794E-03	.0771	4.549E-03	.0924	4.434E-03	.0901	.1500	0	0
12	543.5	5.058	6.209E-03	.1262	7.451E-03	.1514	7.261E-03	.1475	.1500	30.0000	
13	539.1	3.386	4.134E-03	.0840	4.956E-03	.1007	4.830E-03	.0982	.1500	45.5000	
17	540.0	3.663	4.478E-03	.0910	5.370E-03	.1091	5.267E-03	.1070	.2000		.1070
19	536.9	2.610	3.179E-03	.0646	3.809E-03	.0774	3.732E-03	.0758	.2250		0
20	536.3	2.513	3.058E-03	.0621	3.664E-03	.0744	3.608E-03	.0733	.2500		0
22	538.4	2.599	3.172E-03	.0644	3.801E-03	.0773	3.748E-03	.0762	.2750		0
24	540.3	3.375	4.127E-03	.0839	4.949E-03	.1006	4.879E-03	.0992	.3000	34.0000	
25	539.2	3.618	4.419E-03	.0898	5.298E-03	.1077	5.223E-03	.1061	.3000	40.0000	
26	539.6	3.814	4.661E-03	.0947	5.588E-03	.1136	5.509E-03	.1120	.3000	45.0000	
29	538.5	2.473	3.018E-03	.0613	3.618E-03	.0735	3.567E-03	.0725	.3250		
30	535.2	1.419	1.724E-03	.0350	2.065E-03	.0420	2.036E-03	.0414	.3500		0
31	537.5	2.129	2.595E-03	.0527	3.110E-03	.0632	3.066E-03	.0623	.4000		0
32	539.5	2.672	3.264E-03	.0663	3.914E-03	.0795	3.859E-03	.0784	.4000		0
33	538.9	2.312	2.822E-03	.0573	3.383E-03	.0687	3.335E-03	.0678	.4500		.1070
34	538.1	2.329	2.841E-03	.0577	3.405E-03	.0692	3.357E-03	.0682	.5000		0
35	538.3	2.349	2.866E-03	.0582	3.435E-03	.0698	3.386E-03	.0688	.5000		0
37	539.1	2.418	2.953E-03	.0600	3.540E-03	.0719	3.490E-03	.0709	.5500		.1070
38	542.7	2.711	3.325E-03	.0676	3.989E-03	.0811	3.933E-03	.0799	.6000		0
39	542.5	2.660	3.262E-03	.0663	3.914E-03	.0795	3.858E-03	.0784	.6000		0
40	544.6	3.127	3.845E-03	.0781	4.615E-03	.0938	4.549E-03	.0924	.6500		.1070
41	548.4	3.905	4.823E-03	.0980	5.795E-03	.1178	5.712E-03	.1161	.7000		0
43	552.2	4.888	6.066E-03	.1233	7.296E-03	.1483	7.191E-03	.1461	.7500		0
44	556.9	6.405	7.995E-03	.1625	9.627E-03	.1956	9.488E-03	.1928	.8000		0
45	556.8	5.982	7.467E-03	.1517	8.991E-03	.1827	8.860E-03	.1801	.8000		.1070
46	559.4	7.212	9.031E-03	.1835	1.088E-02	.2211	1.081E-02	.2197	.8500		0
47	556.8	6.896	8.606E-03	.1749	1.036E-02	.2106	1.037E-02	.2106	.9000		0
48	555.8	6.541	8.154E-03	.1657	9.815E-03	.1995	9.818E-03	.1995	.9000		.1070
49	553.6	6.340	7.882E-03	.1602	9.483E-03	.1927	9.552E-03	.1941	.9500		0
50	552.1	6.439	7.990E-03	.1624	9.609E-03	.1953	9.722E-03	.1976	1.0000		0
51	552.5	6.665	8.274E-03	.1681	9.951E-03	.2022	1.007E-02	.2046	1.0000		.2140

12/ 5/73

AEDC(APO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
32	1		8.00	861.6	1358	30.11	.11	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.4	.088	3.954	3888	7.526E-05	7.921E-08	3.694E 06	4.921E-02	2.111E-02	1

GAGE	TW	GDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	543.2	3.718	4.562E-03	.0927	5.475E-03	.1113	5.275E-03	.1072	.0820	.2500
53	541.8	3.155	3.866E-03	.0786	4.637E-03	.0942	4.537E-03	.0922	.3020	.2500
54	542.9	2.565	3.147E-03	.0640	3.777E-03	.0767	3.692E-03	.0750	.4470	.2500
55	548.3	3.190	3.940E-03	.0801	4.734E-03	.0962	4.636E-03	.0942	.5910	.2500
56	561.1	6.565	8.238E-03	.1674	9.930E-03	.2018	9.835E-03	.1999	.7360	.2500
57	558.6	7.577	9.478E-03	.1926	1.142E-02	.2320	1.135E-02	.2307	.8810	.2500
58	556.0	6.911	8.617E-03	.1751	1.037E-02	.2108	9.760E-03	.1983	.0500	.4000
59	553.1	5.428	6.743E-03	.1370	8.112E-03	.1648	7.752E-03	.1575	.1000	.4000
60	550.3	4.151	5.139E-03	.1044	6.177E-03	.1255	5.940E-03	.1207	.2000	.4000
61	551.3	3.954	4.902E-03	.0996	5.894E-03	.1198	5.698E-03	.1158	.3000	.4000
62	560.4	5.771	7.235E-03	.1470	8.719E-03	.1772	8.509E-03	.1729	.5600	.4000
63	559.1	6.672	8.351E-03	.1697	1.006E-02	.2045	9.895E-03	.2011	.7000	.4000
64	560.7	5.809	7.195E-03	.1462	8.650E-03	.1758	8.761E-03	.1780	.9000	.4000
65	558.3	5.607	7.012E-03	.1425	8.447E-03	.1716	8.168E-03	.1660	.1760	.5000
66	590.3	14.415	1.854E-02	.3767	2.246E-02	.4563	2.163E-02	.4396	.4840	.5000
82	568.2	11.808	1.495E-02	.3038	1.806E-02	.3669	1.771E-02	.3599	.7000	.5000
67	563.0	7.167	8.902E-03	.1809	1.071E-02	.2176	1.087E-02	.2209	.9000	.5000
68	557.5	6.343	7.923E-03	.1610	9.542E-03	.1939	9.207E-03	.1871	.1000	.6000
69	559.3	5.694	7.130E-03	.1449	8.590E-03	.1746	8.295E-03	.1686	.2000	.6000
70	560.2	5.959	7.470E-03	.1518	9.002E-03	.1829	8.663E-03	.1760	.4300	.6000
71	563.4	10.903	1.372E-02	.2788	1.655E-02	.3363	1.609E-02	.3270	.6000	.6000
72	558.9	9.028	1.130E-02	.2296	1.361E-02	.2766	1.359E-02	.2761	.8000	.6000
73	563.2	7.256	9.016E-03	.1832	1.085E-02	.2204	1.100E-02	.2236	.9000	.6000
74	580.8	13.941	1.794E-02	.3645	2.173E-02	.4417	2.090E-02	.4247	.1000	.7500
75	562.4	4.224	5.244E-03	.1066	6.307E-03	.1282	6.077E-03	.1235	.3000	.7500
76	574.2	14.168	1.808E-02	.3673	2.186E-02	.4443	2.111E-02	.4289	.5000	.7500
77	559.2	9.855	1.234E-02	.2507	1.486E-02	.3021	1.461E-02	.2969	.7000	.7500
78	555.9	8.910	1.111E-02	.2257	1.337E-02	.2718	1.355E-02	.2753	.9000	.7500
79	580.3	15.476	1.990E-02	.4044	2.411E-02	.4899	2.315E-02	.4704	.1000	.8500
80	581.2	16.600	2.137E-02	.4342	2.590E-02	.5263	2.490E-02	.5059	.3000	.8500
81	577.9	16.739	2.146E-02	.4360	2.598E-02	.5279	2.509E-02	.5098	.5000	.8500
83	566.0	11.077	1.399E-02	.2842	1.688E-02	.3430	1.620E-02	.3292	.1000	.9500
84	562.0	10.426	1.310E-02	.2662	1.579E-02	.3209	1.528E-02	.3105	.5000	.9500
85	663.7	-2.496	-3.595E-03	-.0730	-4.469E-03	-.0908	-4.527E-03	-.0920	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PHEBEND	ROLL MODEL	YAW
33	1		8.00	860.4	1350	35.21	5.21	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.8	.088	3.948	3877	7.558E-05	7.877E-08	3.721E 06	4.912E-02	2.105E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	533.8	5.088	6.233E-03	.1269	7.468E-03	.1520	4.931E-03	.1004	.0050		0
4	584.0	20.848	2.722E-02	.5541	3.304E-02	.6726	2.617E-02	.5328	.0120		0
2	562.3	14.303	1.816E-02	.3697	2.191E-02	.4461	1.844E-02	.3754	.0200		0
3	548.0	9.471	1.181E-02	.2404	1.420E-02	.2891	1.259E-02	.2564	.0400		0
6	540.7	7.132	8.813E-03	.1794	1.058E-02	.2153	9.611E-03	.1957	.0600		0
7	536.7	5.940	7.304E-03	.1487	8.757E-03	.1783	8.101E-03	.1649	.0800		0
8	534.8	5.315	6.520E-03	.1327	7.814E-03	.1591	7.307E-03	.1488	.1000		0
10	530.0	3.990	4.866E-03	.0991	5.825E-03	.1186	5.522E-03	.1124	.1500	0	0
12	536.1	5.872	7.215E-03	.1469	8.649E-03	.1761	8.195E-03	.1668	.1500	30.0000	
13	529.0	3.672	4.473E-03	.0911	5.353E-03	.1090	5.075E-03	.1033	.1500	45.5000	
17	531.9	4.523	5.529E-03	.1126	6.622E-03	.1348	6.321E-03	.1287	.2000		.1070
19	527.7	3.421	4.160E-03	.0847	4.978E-03	.1013	4.746E-03	.0966	.2250		0
20	527.7	3.326	4.045E-03	.0824	4.840E-03	.0985	4.641E-03	.0945	.2500		0
22	528.3	3.346	4.072E-03	.0829	4.872E-03	.0992	4.678E-03	.0952	.2750		0
24	532.7	4.241	5.188E-03	.1056	6.215E-03	.1265	5.965E-03	.1214	.3000	34.0000	
25	533.7	4.493	5.504E-03	.1121	6.595E-03	.1343	6.330E-03	.1289	.3000	40.0000	
26	534.0	4.524	5.544E-03	.1129	6.643E-03	.1352	6.376E-03	.1298	.3000	45.0000	
29	530.7	3.184	3.887E-03	.0791	4.653E-03	.0947	4.467E-03	.0909	.3250		0
30	527.2	2.139	2.599E-03	.0529	3.109E-03	.0633	2.986E-03	.0608	.3500		0
31	532.8	2.771	3.391E-03	.0690	4.062E-03	.0827	3.899E-03	.0794	.4000		0
32	534.6	3.245	3.980E-03	.0810	4.770E-03	.0971	4.578E-03	.0932	.4000		.1070
33	536.5	2.961	3.640E-03	.0741	4.364E-03	.0888	4.188E-03	.0853	.4500		0
34	538.9	3.140	3.871E-03	.0788	4.644E-03	.0945	4.456E-03	.0907	.5000		0
35	538.2	2.946	3.629E-03	.0739	4.353E-03	.0886	4.177E-03	.0850	.5000		.1070
37	542.5	3.392	4.201E-03	.0855	5.044E-03	.1027	4.839E-03	.0985	.5500		0
38	549.3	4.017	5.017E-03	.1021	6.034E-03	.1228	5.786E-03	.1178	.6000		0
39	549.4	3.877	4.843E-03	.0986	5.825E-03	.1186	5.586E-03	.1137	.6000		.1070
40	555.5	4.817	6.063E-03	.1234	7.304E-03	.1487	7.001E-03	.1425	.6500		0
41	563.2	6.161	7.831E-03	.1594	9.453E-03	.1925	9.057E-03	.1844	.7000		0
43	565.8	7.492	9.553E-03	.1945	1.154E-02	.2349	1.105E-02	.2250	.7500		0
44	568.9	9.186	1.176E-02	.2394	1.422E-02	.2894	1.362E-02	.2772	.8000		0
45	570.0	9.245	1.185E-02	.2413	1.433E-02	.2918	1.373E-02	.2795	.8000		.1070
46	568.6	10.036	1.284E-02	.2615	1.553E-02	.3161	1.501E-02	.3055	.8500		0
47	563.4	9.079	1.154E-02	.2350	1.393E-02	.2837	1.358E-02	.2764	.9000		0
48	562.1	8.858	1.124E-02	.2289	1.357E-02	.2762	1.322E-02	.2691	.9000		.1070
49	557.8	8.226	1.038E-02	.2114	1.252E-02	.2548	1.230E-02	.2503	.9500		0
50	556.3	8.105	1.021E-02	.2079	1.230E-02	.2505	1.215E-02	.2474	1.0000		0
51	556.7	8.162	1.029E-02	.2095	1.240E-02	.2524	1.224E-02	.2493	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
33	1		8.00	860.4	1350	35.21	5.21	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.8	.088	3.948	3877	7.558E-05	7.877E-08	3.721E 06	4.912E-02	2.105E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	538.3	4.315	5.316E-03	.1082	6.377E-03	.1298	5.967E-03	.1215	.0820	.2500
53	540.8	3.537	4.371E-03	.0890	5.247E-03	.1068	4.991E-03	.1016	.3020	.2500
54	548.7	3.370	4.206E-03	.0856	5.058E-03	.1030	4.805E-03	.0978	.4470	.2500
55	563.9	5.369	6.830E-03	.1391	8.247E-03	.1679	7.843E-03	.1597	.5910	.2500
56	572.8	9.824	1.264E-02	.2573	1.530E-02	.3114	1.473E-02	.2999	.7360	.2500
57	565.2	9.392	1.197E-02	.2436	1.445E-02	.2942	1.398E-02	.2847	.8810	.2500
58	560.2	6.831	8.648E-03	.1761	1.043E-02	.2124	9.497E-03	.1933	.0500	.4000
59	560.5	5.949	7.536E-03	.1534	9.090E-03	.1851	8.415E-03	.1713	.1000	.4000
60	578.2	10.684	1.384E-02	.2818	1.678E-02	.3416	1.561E-02	.3177	.2000	.4000
61	571.4	6.794	8.726E-03	.1776	1.056E-02	.2149	9.888E-03	.2013	.3000	.4000
62	578.4	10.865	1.408E-02	.2867	1.707E-02	.3475	1.615E-02	.3289	.5600	.4000
63	573.0	10.732	1.381E-02	.2812	1.672E-02	.3403	1.597E-02	.3251	.7000	.4000
64	561.9	8.080	1.025E-02	.2087	1.237E-02	.2518	1.223E-02	.2490	.9000	.4000
65	569.9	6.150	7.884E-03	.1605	9.534E-03	.1941	8.937E-03	.1819	.1760	.5000
66	596.6	14.244	1.866E-02	.3799	2.267E-02	.4615	2.115E-02	.4307	.4840	.5000
82	576.4	11.868	1.534E-02	.3123	1.858E-02	.3784	1.770E-02	.3604	.7000	.5000
67	563.0	8.132	1.033E-02	.2103	1.247E-02	.2539	1.236E-02	.2517	.9000	.5000
68	570.6	7.689	9.866E-03	.2008	1.193E-02	.2429	1.116E-02	.2271	.1000	.6000
69	570.2	6.273	8.044E-03	.1638	9.728E-03	.1981	9.105E-03	.1854	.2000	.6000
70	573.7	8.127	1.047E-02	.2131	1.267E-02	.2580	1.181E-02	.2405	.4300	.6000
71	574.3	11.918	1.540E-02	.3136	1.866E-02	.3799	1.759E-02	.3582	.6000	.6000
72	570.5	10.034	1.287E-02	.2620	1.557E-02	.3169	1.513E-02	.3079	.8000	.6000
73	563.9	8.392	1.068E-02	.2173	1.289E-02	.2624	1.277E-02	.2599	.9000	.6000
74	572.9	6.627	8.528E-03	.1736	1.032E-02	.2101	9.626E-03	.1960	.1000	.7500
75	566.6	4.847	6.188E-03	.1260	7.476E-03	.1522	6.980E-03	.1421	.3000	.7500
76	565.7	4.716	6.013E-03	.1224	7.263E-03	.1479	6.805E-03	.1385	.5000	.7500
77	555.2	3.587	4.513E-03	.0919	5.436E-03	.1107	5.196E-03	.1058	.7000	.7500
78	560.3	6.129	7.762E-03	.1580	9.362E-03	.1906	9.259E-03	.1885	.9000	.7500
79	614.5	21.380	2.868E-02	.5839	3.502E-02	.7130	3.249E-02	.6614	.1000	.8500
80	574.1	8.665	1.117E-02	.2274	1.352E-02	.2753	1.261E-02	.2566	.3000	.8500
81	565.5	5.344	6.812E-03	.1387	8.227E-03	.1675	7.713E-03	.1570	.5000	.8500
83	582.2	13.426	1.749E-02	.3560	2.122E-02	.4319	1.970E-02	.4012	.1000	.9500
84	581.8	14.329	1.865E-02	.3797	2.263E-02	.4607	2.121E-02	.4318	.5000	.9500
85	669.6	1.279	1.879E-03	.0383	2.344E-03	.0477	2.306E-03	.0470	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
34	1		8.00	861.6	1357	25.18	-4.82	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.3	.088	3.954	3887	7.529E-05	7.918E-08	3.697E 06	4.920E-02	2.110E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	521.6	3.665	4.387E-03	.0892	5.238E-03	.1065	3.778E-03	.0768	.0050		0
4	566.6	18.841	2.384E-02	.4845	2.878E-02	.5849	2.475E-02	.5030	.0120		0
2	545.3	12.121	1.493E-02	.3035	1.793E-02	.3644	1.624E-02	.3301	.0200		0
3	532.5	7.578	9.191E-03	.1868	1.100E-02	.2236	1.042E-02	.2117	.0400		0
6	525.8	5.391	6.486E-03	.1318	7.751E-03	.1575	7.486E-03	.1521	.0600		0
7	522.4	4.346	5.207E-03	.1058	6.218E-03	.1264	6.093E-03	.1238	.0800		0
8	521.2	3.832	4.585E-03	.0932	5.474E-03	.1113	5.410E-03	.1100	.1000		0
10	517.9	2.569	3.062E-03	.0622	3.653E-03	.0742	3.648E-03	.0742	.1500	0	0
12	524.2	4.489	5.390E-03	.1096	6.440E-03	.1309	6.432E-03	.1307	.1500	30.0000	
13	521.3	3.404	4.073E-03	.0828	4.862E-03	.0988	4.856E-03	.0987	.1500	45.5000	
17	521.9	3.160	3.784E-03	.0769	4.519E-03	.0918	4.539E-03	.0922	.2000		.1070
19	518.5	2.033	2.424E-03	.0493	2.892E-03	.0588	2.902E-03	.0590	.2250		0
20	519.5	1.977	2.360E-03	.0480	2.817E-03	.0573	2.839E-03	.0577	.2500		0
22	520.5	1.999	2.390E-03	.0486	2.852E-03	.0580	2.877E-03	.0585	.2750		0
24	525.3	2.967	3.567E-03	.0725	4.262E-03	.0866	4.300E-03	.0874	.3000	34.0000	
25	526.0	3.219	3.874E-03	.0787	4.630E-03	.0941	4.670E-03	.0949	.3000	40.0000	
26	527.4	3.499	4.217E-03	.0857	5.042E-03	.1025	5.087E-03	.1034	.3000	45.0000	
29	522.8	1.940	2.325E-03	.0473	2.777E-03	.0564	2.801E-03	.0569	.3250		0
30	520.3	1.304	1.559E-03	.0317	1.860E-03	.0378	1.877E-03	.0381	.3500		0
31	524.3	1.688	2.028E-03	.0412	2.422E-03	.0492	2.444E-03	.0497	.4000		0
32	526.8	2.222	2.676E-03	.0544	3.199E-03	.0650	3.227E-03	.0656	.4000		.1070
33	527.5	1.789	2.157E-03	.0438	2.578E-03	.0524	2.601E-03	.0529	.4500		0
34	530.5	1.756	2.124E-03	.0432	2.541E-03	.0517	2.564E-03	.0521	.5000		0
35	531.1	1.766	2.138E-03	.0435	2.559E-03	.0520	2.582E-03	.0525	.5000		.1070
37	535.1	1.724	2.097E-03	.0426	2.512E-03	.0511	2.535E-03	.0515	.5500		0
38	540.2	1.746	2.137E-03	.0434	2.563E-03	.0521	2.586E-03	.0526	.6000		0
39	540.6	1.697	2.079E-03	.0423	2.493E-03	.0507	2.516E-03	.0511	.6000		.1070
40	545.3	1.722	2.122E-03	.0431	2.547E-03	.0518	2.571E-03	.0522	.6500		0
41	549.2	1.849	2.289E-03	.0465	2.751E-03	.0559	2.776E-03	.0564	.7000		0
43	552.4	2.079	2.583E-03	.0525	3.107E-03	.0632	3.136E-03	.0637	.7500		0
44	555.0	2.456	3.062E-03	.0622	3.686E-03	.0749	3.720E-03	.0756	.8000		0
45	555.6	2.484	3.099E-03	.0630	3.731E-03	.0758	3.766E-03	.0765	.8000		.1070
46	555.5	2.986	3.726E-03	.0757	4.485E-03	.0912	4.558E-03	.0926	.8500		0
47	553.5	3.149	3.920E-03	.0797	4.716E-03	.0959	4.821E-03	.0980	.9000		0
48	554.0	3.321	4.136E-03	.0841	4.977E-03	.1012	5.088E-03	.1034	.9000		.1070
49	550.1	3.120	3.866E-03	.0786	4.648E-03	.0945	4.780E-03	.0971	.9500		0
50	548.5	3.564	4.408E-03	.0896	5.297E-03	.1077	5.467E-03	.1111	1.0000		0
51	552.6	5.044	6.270E-03	.1274	7.543E-03	.1533	7.787E-03	.1583	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	Po,PSIA	To,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
34	1		8.00	861.6	1357	25.18	-4.82	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.3	.088	3.954	3887	7.529E-05	7.918E-08	3.697E 06	4.920E-02	2.110E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	531.2	3.509	4.249E-03	.0864	5.084E-03	.1033	5.028E-03	.1022	.0820	.2500
53	534.8	2.723	3.312E-03	.0673	3.967E-03	.0806	3.976E-03	.0808	.3020	.2500
54	541.5	1.866	2.288E-03	.0465	2.745E-03	.0558	2.749E-03	.0559	.4470	.2500
55	552.1	1.506	1.870E-03	.0380	2.250E-03	.0457	2.257E-03	.0459	.5910	.2500
56	561.5	3.605	4.532E-03	.0921	5.464E-03	.1111	5.540E-03	.1126	.7360	.2500
57	560.7	5.243	6.584E-03	.1338	7.937E-03	.1613	8.073E-03	.1641	.8810	.2500
58	558.7	7.418	9.292E-03	.1889	1.120E-02	.2275	1.084E-02	.2202	.0500	.4000
59	555.0	5.064	6.314E-03	.1283	7.600E-03	.1545	7.460E-03	.1516	.1000	.4000
60	555.7	3.563	4.447E-03	.0904	5.353E-03	.1088	5.283E-03	.1074	.2000	.4000
61	559.2	3.156	3.955E-03	.0804	4.766E-03	.0969	4.728E-03	.0961	.3000	.4000
62	578.2	8.702	1.117E-02	.2271	1.353E-02	.2750	1.354E-02	.2752	.5600	.4000
63	574.8	8.641	1.105E-02	.2245	1.337E-02	.2717	1.347E-02	.2737	.7000	.4000
64	561.2	5.915	7.432E-03	.1511	8.960E-03	.1821	9.262E-03	.1883	.9000	.4000
65	565.1	4.953	6.255E-03	.1271	7.548E-03	.1534	7.490E-03	.1522	.1760	.5000
66	578.5	8.223	1.056E-02	.2147	1.279E-02	.2600	1.266E-02	.2573	.4840	.5000
82	577.1	9.363	1.201E-02	.2440	1.453E-02	.2954	1.461E-02	.2970	.7000	.5000
67	560.1	5.387	6.760E-03	.1374	8.148E-03	.1656	8.439E-03	.1715	.9000	.5000
68	561.1	3.591	4.512E-03	.0917	5.439E-03	.1106	5.387E-03	.1095	.1000	.6000
69	565.2	3.829	4.836E-03	.0983	5.836E-03	.1186	5.784E-03	.1176	.2000	.6000
70	578.5	8.103	1.041E-02	.2115	1.261E-02	.2562	1.245E-02	.2531	.4300	.6000
71	579.1	10.389	1.335E-02	.2714	1.618E-02	.3288	1.614E-02	.3280	.6000	.6000
72	569.7	7.959	1.011E-02	.2055	1.221E-02	.2482	1.247E-02	.2534	.8000	.6000
73	561.9	6.194	7.790E-03	.1583	9.394E-03	.1909	9.723E-03	.1976	.9000	.6000
74	579.2	9.860	1.268E-02	.2577	1.536E-02	.3121	1.518E-02	.3085	.1000	.7500
75	585.0	12.582	1.630E-02	.3312	1.977E-02	.4019	1.954E-02	.3972	.3000	.7500
76	587.8	13.952	1.814E-02	.3687	2.202E-02	.4476	2.183E-02	.4437	.5000	.7500
77	566.8	7.804	9.876E-03	.2007	1.192E-02	.2423	1.201E-02	.2441	.7000	.7500
78	564.3	7.284	9.189E-03	.1868	1.109E-02	.2253	1.146E-02	.2330	.9000	.7500
79	575.4	8.766	1.121E-02	.2279	1.357E-02	.2758	1.339E-02	.2722	.1000	.8500
80	578.2	10.086	1.295E-02	.2632	1.568E-02	.3187	1.550E-02	.3149	.3000	.8500
81	578.2	11.644	1.495E-02	.3039	1.811E-02	.3680	1.796E-02	.3650	.5000	.8500
83	573.1	8.582	1.095E-02	.2225	1.324E-02	.2691	1.305E-02	.2653	.1000	.9500
84	561.4	5.181	6.512E-03	.1324	7.852E-03	.1596	7.798E-03	.1585	.5000	.9500
85	665.3	-.830	-1.200E-03	-.0244	-1.493E-03	-.0303	-1.550E-03	-.0315	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
35	1		8.00	862.1	1360	30.21	.21	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.6	.088	3.956	3892	7.515E-05	7.937E-08	3.685E 06	4.924E-02	2.113E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	174.1	7.785	6.565E-03	.1333	7.415E-03	.1506	5.721E-03	.1162	.0050		0
4	271.8	26.298	2.417E-02	.4908	2.762E-02	.5609	2.417E-02	.4909	.0120		0
2	227.9	18.683	1.650E-02	.3352	1.876E-02	.3809	1.711E-02	.3474	.0200		0
3	199.4	13.510	1.164E-02	.2364	1.319E-02	.2680	1.244E-02	.2527	.0400		0
6	181.0	10.178	8.633E-03	.1753	9.758E-03	.1982	9.352E-03	.1899	.0600		0
7	171.8	8.781	7.391E-03	.1501	8.346E-03	.1695	8.086E-03	.1642	.0800		0
8	169.6	7.976	6.700E-03	.1361	7.565E-03	.1536	7.377E-03	.1498	.1000		0
10	159.5	6.422	5.349E-03	.1086	6.033E-03	.1225	5.931E-03	.1205	.1500	0	0
12	178.1	8.641	7.311E-03	.1485	8.262E-03	.1678	8.121E-03	.1649	.1500	30.0000	
13	169.8	6.383	5.363E-03	.1089	6.055E-03	.1230	5.952E-03	.1209	.1500	45.5000	
17	173.3	6.420	5.410E-03	.1099	6.110E-03	.1241	6.032E-03	.1225	.2000		.1070
19	155.5	5.312	4.410E-03	.0896	4.972E-03	.1010	4.905E-03	.0996	.2250		0
20	155.5	5.458	4.532E-03	.0920	5.108E-03	.1037	5.056E-03	.1027	.2500		0
22	159.6	5.619	4.681E-03	.0951	5.279E-03	.1072	5.230E-03	.1062	.2750		0
24	167.8	6.138	5.148E-03	.1046	5.811E-03	.1180	5.756E-03	.1169	.3000	34.0000	
25	174.7	6.470	5.459E-03	.1109	6.166E-03	.1252	6.107E-03	.1240	.3000	40.0000	
26	181.1	6.647	5.638E-03	.1145	6.373E-03	.1294	6.312E-03	.1282	.3000	45.0000	
29	171.5	4.648	3.911E-03	.0794	4.417E-03	.0897	4.375E-03	.0888	.3250		
30	171.5	4.821	4.056E-03	.0824	4.580E-03	.0930	4.537E-03	.0921	.3500		0
31	167.0	4.343	3.641E-03	.0739	4.109E-03	.0835	4.070E-03	.0827	.4000		0
32	169.8	4.990	4.193E-03	.0852	4.734E-03	.0961	4.689E-03	.0952	.4000		0
33	168.4	4.523	3.795E-03	.0771	4.284E-03	.0870	4.244E-03	.0862	.4500		.1070
34	166.2	4.890	4.096E-03	.0832	4.623E-03	.0939	4.579E-03	.0930	.5000		0
35	167.0	4.681	3.923E-03	.0797	4.428E-03	.0899	4.386E-03	.0891	.5000		0
37	177.7	4.465	3.776E-03	.0767	4.267E-03	.0867	4.226E-03	.0858	.5500		.1070
38	187.8	4.848	4.136E-03	.0840	4.679E-03	.0950	4.634E-03	.0941	.6000		0
39	190.0	4.739	4.050E-03	.0823	4.583E-03	.0931	4.538E-03	.0922	.6000		0
40	197.6	5.306	4.565E-03	.0927	5.170E-03	.1050	5.119E-03	.1040	.6500		.1070
41	205.1	6.224	5.389E-03	.1094	6.109E-03	.1241	6.048E-03	.1228	.7000		0
43	222.7	7.508	6.602E-03	.1341	7.498E-03	.1523	7.423E-03	.1508	.7500		0
44	225.9	9.418	8.304E-03	.1686	9.436E-03	.1916	9.341E-03	.1897	.8000		0
45	245.5	8.429	7.563E-03	.1536	8.614E-03	.1749	8.525E-03	.1731	.8000		.1070
46	232.3	10.867	9.636E-03	.1957	1.096E-02	.2225	1.091E-02	.2215	.8500		0
47	221.3	11.398	1.001E-02	.2033	1.137E-02	.2308	1.136E-02	.2308	.9000		0
48	222.1	10.108	8.883E-03	.1804	1.009E-02	.2049	1.009E-02	.2049	.9000		.1070
49	220.4	10.435	9.157E-03	.1860	1.040E-02	.2112	1.044E-02	.2121	.9500		0
50	213.3	10.589	9.234E-03	.1875	1.048E-02	.2128	1.056E-02	.2144	1.0000		0
51	228.8	9.854	8.711E-03	.1769	9.901E-03	.2011	9.976E-03	.2026	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
35	1		8.00	862.1	1360	30.21	.21	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.6	.088	3.956	2292	7.515E-05	7.937E-08	3.685E 06	4.924E-02	2.113E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	190.3	6.015	5.142E-03	.1044	5.818E-03	.1182	5.675E-03	.1152	.0820	.2500
53	182.5	5.902	5.012E-03	.1018	5.667E-03	.1151	5.584E-03	.1134	.3020	.2500
54	190.6	4.939	4.223E-03	.0858	4.779E-03	.0971	4.706E-03	.0956	.4470	.2500
55	199.1	5.409	4.659E-03	.0946	5.277E-03	.1072	5.203E-03	.1057	.5910	.2500
56	235.7	8.503	7.563E-03	.1536	8.603E-03	.1747	8.545E-03	.1735	.7360	.2500
57	227.6	10.515	9.285E-03	.1886	1.055E-02	.2143	1.051E-02	.2134	.8810	.2500
58	212.6	10.397	9.061E-03	.1840	1.028E-02	.2088	9.867E-03	.2004	.0500	.4000
59	203.7	8.604	7.440E-03	.1511	8.432E-03	.1712	8.179E-03	.1661	.1000	.4000
60	191.1	6.914	5.915E-03	.1201	6.693E-03	.1359	6.521E-03	.1324	.2000	.4000
61	194.7	7.119	6.109E-03	.1241	6.916E-03	.1405	6.762E-03	.1373	.3000	.4000
62	205.5	8.601	7.450E-03	.1513	8.445E-03	.1715	8.309E-03	.1687	.5600	.4000
63	201.4	9.463	8.168E-03	.1659	9.254E-03	.1879	9.151E-03	.1859	.7000	.4000
64	185.0	8.492	7.228E-03	.1468	8.174E-03	.1660	8.239E-03	.1673	.9000	.4000
65	211.6	9.559	8.324E-03	.1690	9.442E-03	.1918	9.231E-03	.1875	.1760	.5000
66	196.3	8.300	7.133E-03	.1449	8.076E-03	.1640	7.886E-03	.1602	.4840	.5000
82	189.3	8.530	7.286E-03	.1480	8.244E-03	.1674	8.141E-03	.1653	.7000	.5000
67	174.5	7.737	6.527E-03	.1325	7.372E-03	.1497	7.442E-03	.1511	.9000	.5000
68	215.6	11.877	1.038E-02	.2108	1.178E-02	.2392	1.150E-02	.2335	.1000	.6000
69	208.7	9.924	8.620E-03	.1751	9.774E-03	.1985	9.548E-03	.1939	.2000	.6000
70	198.0	8.805	7.577E-03	.1539	8.582E-03	.1743	8.367E-03	.1699	.4300	.6000
71	178.0	7.112	6.017E-03	.1222	6.800E-03	.1381	6.678E-03	.1356	.6000	.6000
72	169.4	5.762	4.840E-03	.0983	5.464E-03	.1110	5.456E-03	.1108	.8000	.6000
73	169.3	6.024	5.059E-03	.1027	5.712E-03	.1160	5.762E-03	.1170	.9000	.6000
74	276.6	27.289	2.519E-02	.5115	2.880E-02	.5850	2.804E-02	.5694	.1000	.7500
75	197.5	8.491	7.304E-03	.1483	8.272E-03	.1680	8.069E-03	.1639	.3000	.7500
76	196.3	7.679	6.543E-03	.1329	7.401E-03	.1503	7.236E-03	.1469	.5000	.7500
77	176.3	6.867	5.802E-03	.1178	6.555E-03	.1331	6.482E-03	.1316	.7000	.7500
78	166.7	6.012	5.038E-03	.1023	5.686E-03	.1155	5.732E-03	.1164	.9000	.7500
79	252.6	22.314	2.015E-02	.4092	2.297E-02	.4665	2.235E-02	.4538	.1000	.8500
80	252.9	23.713	2.142E-02	.4350	2.442E-02	.4959	2.378E-02	.4829	.3000	.8500
81	247.7	23.624	2.124E-02	.4313	2.420E-02	.4914	2.363E-02	.4800	.5000	.8500
83	229.6	16.878	1.493E-02	.3032	1.697E-02	.3447	1.651E-02	.3353	.1000	.9500
84	214.7	16.441	1.435E-02	.2915	1.629E-02	.3308	1.593E-02	.3236	.5000	.9500
85	210.6	16.282	1.416E-02	.2877	1.607E-02	.3263	1.618E-02	.3285	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
36	1		8.00	862.2	1356	34.81	4.81	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.3	.088	3.957	3886	7.542E-05	7.910E-08	3.705E 06	4.921E-02	2.108E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	174.2	8.623	7.297E-03	.1483	8.242E-03	.1675	6.183E-03	.1256	.0050		0
4	268.5	27.231	2.504E-02	.5088	2.861E-02	.5813	2.441E-02	.4960	.0120		0
2	227.5	19.554	1.733E-02	.3521	1.969E-02	.4002	1.755E-02	.3566	.0200		0
3	200.1	14.457	1.251E-02	.2541	1.417E-02	.2879	1.310E-02	.2662	.0400		0
6	193.9	11.421	9.744E-03	.1980	1.102E-02	.2239	1.036E-02	.2105	.0600		0
7	173.7	9.834	8.317E-03	.1690	9.394E-03	.1909	8.938E-03	.1816	.0800		0
8	173.6	9.243	7.817E-03	.1589	8.830E-03	.1794	8.461E-03	.1719	.1000		0
10	163.2	7.368	6.177E-03	.1255	6.969E-03	.1416	6.739E-03	.1369	.1500	0	0
12	178.4	9.532	8.095E-03	.1645	9.148E-03	.1859	8.842E-03	.1797	.1500	30.0000	
13	166.3	6.729	5.656E-03	.1149	6.384E-03	.1297	6.172E-03	.1254	.1500	45.5000	
17	176.8	7.181	6.090E-03	.1238	6.881E-03	.1398	6.683E-03	.1358	.2000		.1070
19	161.5	6.119	5.123E-03	.1041	5.779E-03	.1174	5.609E-03	.1140	.2250		0
20	162.7	6.353	5.324E-03	.1082	6.007E-03	.1221	5.851E-03	.1189	.2500		0
22	166.5	6.065	5.099E-03	.1036	5.755E-03	.1169	5.611E-03	.1140	.2750		0
24	172.4	6.838	5.777E-03	.1174	6.525E-03	.1326	6.360E-03	.1292	.3000	34.0000	
25	177.0	7.150	6.064E-03	.1232	6.852E-03	.1392	6.679E-03	.1357	.3000	40.0000	
26	182.3	7.274	6.198E-03	.1259	7.007E-03	.1424	6.829E-03	.1388	.3000	45.0000	
29	176.8	5.138	4.357E-03	.0885	4.923E-03	.1000	4.798E-03	.0975	.3250		0
30	179.0	5.169	4.392E-03	.0892	4.963E-03	.1009	4.838E-03	.0983	.3500		0
31	174.5	4.824	4.083E-03	.0830	4.612E-03	.0937	4.496E-03	.0914	.4000		0
32	174.9	5.212	4.412E-03	.0897	4.985E-03	.1013	4.859E-03	.0987	.4000		.1070
33	176.5	4.907	4.161E-03	.0845	4.701E-03	.0955	4.582E-03	.0931	.4500		0
34	175.0	5.367	4.544E-03	.0923	5.134E-03	.1043	5.004E-03	.1017	.5000		0
35	173.4	4.919	4.159E-03	.0845	4.698E-03	.0955	4.580E-03	.0931	.5000		.1070
37	195.2	5.345	4.566E-03	.0928	5.164E-03	.1049	5.032E-03	.1023	.5500		0
38	195.4	6.117	5.270E-03	.1071	5.968E-03	.1213	5.814E-03	.1181	.6000		0
39	195.9	5.911	5.095E-03	.1035	5.770E-03	.1172	5.621E-03	.1142	.6000		.1070
40	208.7	7.204	6.279E-03	.1276	7.121E-03	.1447	6.935E-03	.1409	.6500		0
41	224.1	9.106	8.045E-03	.1635	9.140E-03	.1857	8.898E-03	.1808	.7000		0
43	243.4	10.435	9.379E-03	.1906	1.068E-02	.2170	1.039E-02	.2112	.7500		0
44	249.2	12.593	1.138E-02	.2312	1.297E-02	.2635	1.261E-02	.2563	.8000		0
45	257.7	12.543	1.142E-02	.2321	1.303E-02	.2648	1.267E-02	.2575	.8000		.1070
46	254.6	13.893	1.261E-02	.2563	1.439E-02	.2923	1.408E-02	.2861	.8500		0
47	245.3	13.430	1.209E-02	.2457	1.377E-02	.2799	1.355E-02	.2754	.9000		0
48	248.9	12.281	1.109E-02	.2254	1.264E-02	.2569	1.244E-02	.2528	.9000		.1070
49	234.8	12.492	1.114E-02	.2264	1.267E-02	.2576	1.254E-02	.2549	.9500		0
50	224.0	12.365	1.092E-02	.2220	1.241E-02	.2522	1.232E-02	.2504	1.0000		0
51	231.2	11.960	1.063E-02	.2161	1.209E-02	.2457	1.200E-02	.2440	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
36	1		8.00	862.2	1356	34.81	4.81	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (H= .0175FT)	SWITCH POSITION
98.3	.088	3.957	3886	7.542E-05	7.910E-08	3.705E 06	4.921E-02	2.108E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	198.8	7.165	6.139E-03	.1247	6.946E-03	.1411	6.655E-03	.1352	.0820	.2500
53	193.0	6.258	5.335E-03	.1084	6.032E-03	.1226	5.846E-03	.1188	.3020	.2500
54	190.8	5.447	4.674E-03	.0950	5.290E-03	.1075	5.123E-03	.1041	.4470	.2500
55	212.2	8.230	7.195E-03	.1462	8.163E-03	.1659	7.912E-03	.1608	.5910	.2500
56	243.9	13.105	1.178E-02	.2395	1.342E-02	.2727	1.311E-02	.2664	.7360	.2500
57	244.2	13.154	1.183E-02	.2404	1.348E-02	.2738	1.320E-02	.2682	.8810	.2500
58	258.5	21.320	1.943E-02	.3948	2.216E-02	.4504	2.081E-02	.4228	.0500	.4000
59	257.2	21.482	1.955E-02	.3973	2.230E-02	.4532	2.118E-02	.4304	.1000	.4000
60	254.1	19.855	1.802E-02	.3662	2.055E-02	.4175	1.961E-02	.3984	.2000	.4000
61	241.4	18.686	1.677E-02	.3407	1.909E-02	.3879	1.830E-02	.3719	.3000	.4000
62	244.4	19.540	1.758E-02	.3572	2.002E-02	.4068	1.934E-02	.3929	.5600	.4000
63	231.5	17.623	1.567E-02	.3185	1.782E-02	.3621	1.732E-02	.3519	.7000	.4000
64	208.2	12.947	1.128E-02	.2292	1.279E-02	.2599	1.271E-02	.2583	.9000	.4000
65	271.1	24.572	2.265E-02	.4603	2.588E-02	.5260	2.480E-02	.5039	.1760	.5000
66	248.4	21.170	1.911E-02	.3884	2.178E-02	.4426	2.085E-02	.4236	.4840	.5000
82	229.4	18.047	1.602E-02	.3255	1.821E-02	.3700	1.767E-02	.3590	.7000	.5000
67	199.9	13.450	1.163E-02	.2364	1.318E-02	.2678	1.312E-02	.2667	.9000	.5000
68	273.5	26.791	2.475E-02	.5029	2.829E-02	.5750	2.706E-02	.5498	.1000	.6000
69	266.2	24.705	2.267E-02	.4606	2.589E-02	.5261	2.478E-02	.5036	.2000	.6000
70	249.6	22.986	2.077E-02	.4222	2.368E-02	.4811	2.262E-02	.4597	.4300	.6000
71	213.1	17.261	1.510E-02	.3069	1.714E-02	.3482	1.653E-02	.3358	.6000	.6000
72	212.9	15.920	1.393E-02	.2830	1.580E-02	.3211	1.553E-02	.3156	.8000	.6000
73	204.5	14.087	1.223E-02	.2486	1.387E-02	.2818	1.380E-02	.2804	.9000	.6000
74	289.3	31.120	2.917E-02	.5928	3.342E-02	.6792	3.189E-02	.6480	.1000	.7500
75	251.4	23.407	2.119E-02	.4306	2.415E-02	.4908	2.309E-02	.4693	.3000	.7500
76	244.8	22.915	2.062E-02	.4190	2.349E-02	.4773	2.251E-02	.4575	.5000	.7500
77	227.1	19.148	1.696E-02	.3447	1.928E-02	.3918	1.873E-02	.3806	.7000	.7500
78	204.1	15.094	1.310E-02	.2663	1.485E-02	.3018	1.476E-02	.3000	.9000	.7500
79	270.4	27.439	2.528E-02	.5137	2.888E-02	.5870	2.755E-02	.5598	.1000	.8500
80	263.5	26.346	2.412E-02	.4901	2.753E-02	.5595	2.630E-02	.5344	.3000	.8500
81	248.5	24.004	2.167E-02	.4404	2.470E-02	.5019	2.368E-02	.4812	.5000	.8500
83	237.8	19.388	1.734E-02	.3523	1.973E-02	.4010	1.883E-02	.3827	.1000	.9500
84	227.7	20.049	1.777E-02	.3611	2.020E-02	.4104	1.940E-02	.3941	.5000	.9500
85	211.5	17.313	1.513E-02	.3074	1.716E-02	.3487	1.703E-02	.3461	.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	Po,PSIA	To,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
37	1		8.00	863.6	1354	25.22	-4.78	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.1	.088	3.963	3882	7.567E-05	7.897E-08	3.720E 06	4.924E-02	2.104E-02	1

GAGE	TW	GDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	155.5	6.697	5.588E-03	.1135	6.300E-03	.1279	5.023E-03	.1020	.0050		0
4	251.5	24.559	2.228E-02	.4524	2.539E-02	.5157	2.287E-02	.4645	.0120		0
2	210.3	17.678	1.546E-02	.3139	1.753E-02	.3561	1.639E-02	.3328	.0200		0
3	191.6	12.325	1.051E-02	.2135	1.189E-02	.2414	1.146E-02	.2327	.0400		0
6	164.7	8.950	7.526E-03	.1528	8.493E-03	.1725	8.298E-03	.1685	.0600		0
7	155.0	7.350	6.130E-03	.1245	6.911E-03	.1404	6.818E-03	.1385	.0800		0
8	152.1	6.871	5.717E-03	.1161	6.442E-03	.1308	6.392E-03	.1298	.1000		0
10	145.1	5.323	4.403E-03	.0894	4.958E-03	.1007	4.954E-03	.1006	.1500	0	0
12	152.5	7.702	6.464E-03	.1313	7.293E-03	.1481	7.286E-03	.1480	.1500	30.0000	
13	160.8	6.167	5.168E-03	.1050	5.830E-03	.1184	5.825E-03	.1183	.1500	45.5000	
17	163.6	5.375	4.515E-03	.0917	5.095E-03	.1035	5.109E-03	.1038	.2000		.1070
19	143.6	4.054	3.349E-03	.0680	3.771E-03	.0766	3.778E-03	.0767	.2250		0
20	141.3	4.257	3.510E-03	.0713	3.951E-03	.0802	3.971E-03	.0806	.2500		0
22	148.8	4.329	3.592E-03	.0729	4.046E-03	.0822	4.069E-03	.0826	.2750		0
24	154.5	5.411	4.511E-03	.0916	5.085E-03	.1033	5.114E-03	.1039	.3000	34.0000	
25	160.2	5.665	4.746E-03	.0964	5.353E-03	.1087	5.383E-03	.1093	.3000	40.0000	
26	167.1	5.991	5.048E-03	.1025	5.698E-03	.1157	5.731E-03	.1164	.3000	45.0000	
29	172.4	3.735	3.161E-03	.0642	3.570E-03	.0725	3.590E-03	.0729	.3250		0
30	177.2	4.218	3.585E-03	.0728	4.051E-03	.0823	4.074E-03	.0827	.3500		0
31	191.1	7.355	6.325E-03	.1285	7.159E-03	.1454	7.201E-03	.1462	.4000		0
32	153.4	4.539	3.780E-03	.0768	4.261E-03	.0865	4.285E-03	.0870	.4000		.1070
33	204.1	10.404	9.048E-03	.1838	1.026E-02	.2083	1.032E-02	.2095	.4500		0
34	199.4	11.943	1.034E-02	.2101	1.172E-02	.2380	1.179E-02	.2394	.5000		0
35	154.9	3.826	3.191E-03	.0648	3.597E-03	.0730	3.617E-03	.0735	.5000		.1070
37	203.1	12.223	1.062E-02	.2157	1.204E-02	.2444	1.211E-02	.2459	.5500		0
38	203.6	12.214	1.062E-02	.2156	1.203E-02	.2444	1.210E-02	.2458	.6000		0
39	173.7	4.632	3.924E-03	.0797	4.433E-03	.0900	4.458E-03	.0905	.6000		.1070
40	209.8	11.767	1.028E-02	.2089	1.167E-02	.2369	1.173E-02	.2383	.6500		0
41	208.1	12.255	1.069E-02	.2172	1.213E-02	.2463	1.220E-02	.2478	.7000		0
43	216.1	11.575	1.017E-02	.2066	1.155E-02	.2345	1.161E-02	.2359	.7500		0
44	220.3	11.554	1.019E-02	.2070	1.157E-02	.2350	1.164E-02	.2365	.8000		0
45	228.4	12.276	1.091E-02	.2215	1.240E-02	.2518	1.247E-02	.2533	.8000		.1070
46	216.6	11.817	1.039E-02	.2110	1.179E-02	.2395	1.192E-02	.2421	.8500		0
47	210.7	10.178	8.902E-03	.1808	1.010E-02	.2051	1.025E-02	.2081	.9000		0
48	212.5	9.289	8.138E-03	.1653	9.233E-03	.1875	9.367E-03	.1902	.9000		.1070
49	208.2	8.704	7.596E-03	.1543	8.614E-03	.1749	8.773E-03	.1782	.9500		0
50	206.4	8.066	7.028E-03	.1427	7.968E-03	.1618	8.135E-03	.1652	1.0000		0
51	212.9	7.791	6.827E-03	.1387	7.746E-03	.1573	7.910E-03	.1606	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL A
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
37	1		8.00	863.6	1354	25.22	-4.78	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.1	.088	3.963	3882	7.567E-05	7.897E-08	3.720E 06	4.924E-02	2.104E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	175.1	6.090	5.166E-03	.1049	5.836E-03	.1185	5.793E-03	.1176	.0820	.2500
53	169.9	4.737	4.000E-03	.0812	4.517E-03	.0917	4.523E-03	.0919	.3020	.2500
54	173.8	3.608	3.057E-03	.0621	3.454E-03	.0701	3.457E-03	.0702	.4470	.2500
55	174.3	3.685	3.124E-03	.0634	3.529E-03	.0717	3.536E-03	.0718	.5910	.2500
56	205.4	5.391	4.694E-03	.0953	5.321E-03	.1081	5.368E-03	.1090	.7360	.2500
57	207.8	6.956	6.068E-03	.1232	6.881E-03	.1397	6.957E-03	.1413	.8810	.2500
58	201.7	11.068	9.605E-03	.1951	1.088E-02	.2210	1.065E-02	.2163	.0500	.4000
59	187.0	8.441	7.233E-03	.1469	8.182E-03	.1662	8.084E-03	.1642	.1000	.4000
60	174.0	6.435	5.453E-03	.1108	6.160E-03	.1251	6.108E-03	.1240	.2000	.4000
61	169.1	6.282	5.302E-03	.1077	5.986E-03	.1216	5.954E-03	.1209	.3000	.4000
62	178.9	5.858	4.985E-03	.1012	5.634E-03	.1144	5.635E-03	.1144	.5600	.4000
63	174.4	6.064	5.141E-03	.1044	5.807E-03	.1179	5.834E-03	.1185	.7000	.4000
64	164.7	5.285	4.443E-03	.0902	5.014E-03	.1018	5.118E-03	.1039	.9000	.4000
65	191.7	9.162	7.883E-03	.1601	8.922E-03	.1812	8.877E-03	.1803	.1760	.5000
66	180.7	6.890	5.872E-03	.1192	6.638E-03	.1348	6.595E-03	.1339	.4840	.5000
82	176.3	7.517	6.383E-03	.1296	7.212E-03	.1465	7.236E-03	.1469	.7000	.5000
67	158.1	6.802	5.687E-03	.1155	6.414E-03	.1302	6.554E-03	.1331	.9000	.5000
68	187.7	8.191	7.023E-03	.1426	7.946E-03	.1614	7.896E-03	.1604	.1000	.6000
69	175.9	5.750	4.881E-03	.0991	5.515E-03	.1120	5.483E-03	.1113	.2000	.6000
70	174.8	5.364	4.549E-03	.0924	5.139E-03	.1044	5.100E-03	.1036	.4300	.6000
71	162.1	7.843	6.580E-03	.1336	7.423E-03	.1507	7.411E-03	.1505	.6000	.6000
72	161.4	6.592	5.527E-03	.1122	6.235E-03	.1266	6.314E-03	.1282	.8000	.6000
73	161.8	6.367	5.340E-03	.1085	6.024E-03	.1223	6.154E-03	.1250	.9000	.6000
74	228.9	19.934	1.772E-02	.3598	2.014E-02	.4090	1.998E-02	.4059	.1000	.7500
75	224.0	19.274	1.706E-02	.3464	1.938E-02	.3936	1.923E-02	.3906	.3000	.7500
76	229.5	21.342	1.898E-02	.3855	2.158E-02	.4382	2.145E-02	.4357	.5000	.7500
77	214.3	18.420	1.616E-02	.3282	1.834E-02	.3725	1.842E-02	.3742	.7000	.7500
78	187.7	13.105	1.124E-02	.2282	1.271E-02	.2582	1.298E-02	.2637	.9000	.7500
79	202.2	14.939	1.297E-02	.2634	1.470E-02	.2985	1.457E-02	.2960	.1000	.8500
80	212.0	17.091	1.497E-02	.3039	1.698E-02	.3448	1.685E-02	.3421	.3000	.8500
81	212.2	18.812	1.648E-02	.3346	1.869E-02	.3796	1.859E-02	.3776	.5000	.8500
83	206.0	14.909	1.299E-02	.2638	1.472E-02	.2990	1.459E-02	.2963	.1000	.9500
84	167.2	8.942	7.535E-03	.1530	8.505E-03	.1727	8.467E-03	.1720	.5000	.9500
85	177.4	12.052	1.024E-02	.2080	1.158E-02	.2351	1.181E-02	.2398	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	ΦAW
38	1		8.00	865.2	1352	25.17	-4.83	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.0	.089	3.970	3880	7.590E-05	7.887E-08	3.734E 06	4.927E-02	2.101E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	163.9	6.492	5.464E-03	.1109	6.166E-03	.1251	4.910E-03	.0996	.0050		0
4	258.1	24.130	2.206E-02	.4477	2.517E-02	.5108	2.266E-02	.4599	.0120		0
2	217.5	17.312	1.526E-02	.3097	1.732E-02	.3516	1.619E-02	.3286	.0200		0
3	188.9	11.910	1.024E-02	.2078	1.159E-02	.2352	1.117E-02	.2267	.0400		0
6	172.3	8.753	7.420E-03	.1506	8.380E-03	.1701	8.188E-03	.1662	.0600		0
7	163.3	7.472	6.286E-03	.1276	7.093E-03	.1440	6.998E-03	.1420	.0800		0
8	160.9	6.899	5.792E-03	.1176	6.534E-03	.1326	6.483E-03	.1316	.1000		0
10	152.2	5.344	4.455E-03	.0904	5.020E-03	.1019	5.016E-03	.1018	.1500	0	0
12	168.6	7.409	6.328E-03	.1284	7.145E-03	.1450	7.139E-03	.1449	.1500	30.0000	
13	164.9	6.061	5.106E-03	.1036	5.762E-03	.1169	5.757E-03	.1169	.1500	45.5000	
17	167.7	5.303	4.478E-03	.0909	5.055E-03	.1026	5.070E-03	.1029	.2000		.1070
19	149.2	4.054	3.371E-03	.0684	3.798E-03	.0771	3.806E-03	.0772	.2250		0
20	147.9	4.290	3.563E-03	.0723	4.014E-03	.0815	4.034E-03	.0819	.2500		0
22	152.9	4.253	3.547E-03	.0720	3.997E-03	.0811	4.020E-03	.0816	.2750		0
24	163.2	5.241	4.409E-03	.0895	4.975E-03	.1010	5.004E-03	.1016	.3000	34.0000	
25	167.3	5.615	4.740E-03	.0962	5.350E-03	.1086	5.382E-03	.1092	.3000	40.0000	
26	172.2	5.926	5.023E-03	.1019	5.673E-03	.1151	5.706E-03	.1158	.3000	45.0000	
29	175.0	3.316	2.817E-03	.0572	3.183E-03	.0646	3.202E-03	.0650	.3250		
30	176.6	3.121	2.655E-03	.0539	3.000E-03	.0609	3.018E-03	.0613	.3500		0
31	175.7	3.343	2.842E-03	.0577	3.211E-03	.0652	3.230E-03	.0656	.4000		0
32	172.0	3.979	3.372E-03	.0684	3.809E-03	.0773	3.831E-03	.0778	.4000		0
33	175.0	3.292	2.797E-03	.0568	3.160E-03	.0641	3.178E-03	.0645	.4500		.1070
34	161.4	3.893	3.270E-03	.0664	3.689E-03	.0749	3.710E-03	.0753	.5000		0
35	170.5	3.473	2.940E-03	.0597	3.320E-03	.0674	3.339E-03	.0678	.5000		0
37	164.0	3.788	3.188E-03	.0647	3.598E-03	.0730	3.619E-03	.0735	.5500		.1070
38	164.4	3.779	3.182E-03	.0646	3.591E-03	.0729	3.612E-03	.0733	.6000		0
39	171.0	3.582	3.033E-03	.0616	3.425E-03	.0695	3.445E-03	.0699	.6000		0
40	172.6	3.806	3.227E-03	.0655	3.645E-03	.0740	3.667E-03	.0744	.6500		.1070
41	172.0	4.181	3.543E-03	.0719	4.001E-03	.0812	4.025E-03	.0817	.7000		0
43	193.9	4.501	3.853E-03	.0782	4.357E-03	.0884	4.383E-03	.0890	.7500		0
44	188.3	6.102	5.244E-03	.1064	5.933E-03	.1204	5.969E-03	.1211	.8000		0
45	193.1	4.607	3.976E-03	.0807	4.501E-03	.0913	4.528E-03	.0919	.8000		.1070
46	192.9	7.322	6.317E-03	.1282	7.151E-03	.1451	7.227E-03	.1467	.8500		0
47	194.7	7.332	6.335E-03	.1286	7.173E-03	.1456	7.277E-03	.1477	.9000		0
48	193.5	4.802	4.145E-03	.0841	4.692E-03	.0952	4.760E-03	.0966	.9000		.1070
49	193.2	7.114	6.139E-03	.1246	6.949E-03	.1410	7.077E-03	.1436	.9500		0
50	187.3	7.599	6.524E-03	.1324	7.381E-03	.1498	7.534E-03	.1529	1.0000		0
51	201.8	6.873	5.976E-03	.1213	6.772E-03	.1374	6.914E-03	.1403	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
38	1		8.00	865.2	1352	25.17	-4.83	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
98.0	.089	3.970	3880	7.590E-05	7.887E-08	3.734E 06	4.927E-02	2.101E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	189.5	5.497	4.729E-03	.0960	5.351E-03	.1086	5.312E-03	.1078	.0820	.2500
53	183.9	4.484	3.839E-03	.0779	4.341E-03	.0881	4.348E-03	.0882	.3020	.2500
54	176.9	3.708	3.155E-03	.0640	3.565E-03	.0724	3.569E-03	.0724	.4470	.2500
55	173.1	3.620	3.071E-03	.0623	3.468E-03	.0704	3.476E-03	.0706	.5910	.2500
56	197.7	4.991	4.324E-03	.0878	4.898E-03	.0995	4.942E-03	.1003	.7360	.2500
57	200.0	6.416	5.569E-03	.1130	6.310E-03	.1281	6.380E-03	.1295	.8810	.2500
58	227.8	15.542	1.383E-02	.2806	1.572E-02	.3190	1.538E-02	.3121	.0500	.4000
59	203.0	11.307	9.841E-03	.1997	1.115E-02	.2264	1.102E-02	.2236	.1000	.4000
60	182.2	7.884	6.740E-03	.1368	7.621E-03	.1547	7.557E-03	.1534	.2000	.4000
61	174.4	7.030	5.970E-03	.1212	6.744E-03	.1369	6.710E-03	.1362	.3000	.4000
62	198.0	8.838	7.658E-03	.1554	8.675E-03	.1761	8.679E-03	.1761	.5600	.4000
63	197.6	10.532	9.123E-03	.1852	1.033E-02	.2097	1.038E-02	.2107	.7000	.4000
64	179.0	8.580	7.315E-03	.1485	8.267E-03	.1678	8.442E-03	.1713	.9000	.4000
65	248.6	20.469	1.855E-02	.3765	2.114E-02	.4291	2.103E-02	.4269	.1760	.5000
66	233.1	17.399	1.555E-02	.3156	1.769E-02	.3590	1.757E-02	.3566	.4840	.5000
82	213.3	14.798	1.300E-02	.2638	1.475E-02	.2993	1.480E-02	.3004	.7000	.5000
67	179.6	10.031	8.556E-03	.1737	9.671E-03	.1963	9.888E-03	.2007	.9000	.5000
68	233.4	17.243	1.542E-02	.3129	1.753E-02	.3559	1.742E-02	.3536	.1000	.6000
69	235.0	17.414	1.559E-02	.3164	1.774E-02	.3600	1.763E-02	.3578	.2000	.6000
70	238.9	19.433	1.746E-02	.3543	1.987E-02	.4033	1.971E-02	.4001	.4300	.6000
71	206.5	15.650	1.366E-02	.2773	1.549E-02	.3144	1.547E-02	.3139	.6000	.6000
72	196.1	12.642	1.094E-02	.2220	1.239E-02	.2514	1.255E-02	.2547	.8000	.6000
73	187.2	10.842	9.308E-03	.1889	1.053E-02	.2137	1.076E-02	.2185	.9000	.6000
74	235.5	20.140	1.804E-02	.3661	2.052E-02	.4166	2.037E-02	.4134	.1000	.7500
75	233.1	19.294	1.724E-02	.3500	1.961E-02	.3981	1.947E-02	.3951	.3000	.7500
76	229.9	19.786	1.763E-02	.3579	2.005E-02	.4069	1.994E-02	.4047	.5000	.7500
77	208.5	16.017	1.401E-02	.2843	1.588E-02	.3224	1.596E-02	.3239	.7000	.7500
78	191.1	12.507	1.077E-02	.2187	1.219E-02	.2475	1.246E-02	.2528	.9000	.7500
79	206.8	14.625	1.277E-02	.2592	1.448E-02	.2939	1.436E-02	.2914	.1000	.8500
80	217.9	17.045	1.503E-02	.3050	1.706E-02	.3463	1.693E-02	.3437	.3000	.8500
81	214.3	17.616	1.548E-02	.3143	1.757E-02	.3566	1.748E-02	.3548	.5000	.8500
83	211.6	14.753	1.294E-02	.2626	1.468E-02	.2979	1.454E-02	.2952	.1000	.9500
84	172.6	8.890	7.538E-03	.1530	8.514E-03	.1728	8.477E-03	.1720	.5000	.9500
85	181.9	11.777	1.007E-02	.2043	1.138E-02	.2310	1.161E-02	.2356	.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
39	1		8.00	676.8	1341	30.09	.09	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.1	.069	3.106	3864	5.987E-05	7.821E-08	2.95HE 06	4.351E-02	2.363E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	164.0	6.691	5.685E-03	.1307	6.416E-03	.1475	4.961F-03	.1140	.0050		0
4	253.6	23.385	2.150E-02	.4942	2.453E-02	.5638	2.152E-02	.4947	.0120		0
2	214.4	16.883	1.499E-02	.3444	1.701E-02	.3910	1.554E-02	.3571	.0200		0
3	187.6	12.011	1.041E-02	.2393	1.178E-02	.2708	1.113E-02	.2558	.0400		0
6	171.1	8.892	7.601E-03	.1747	8.585E-03	.1973	8.234E-03	.1892	.0600		0
7	161.8	7.612	6.455E-03	.1484	7.283E-03	.1674	7.062E-03	.1623	.0800		0
8	159.4	6.981	5.908E-03	.1358	6.664E-03	.1532	6.503F-03	.1495	.1000		0
10	151.7	5.714	4.805E-03	.1104	5.415E-03	.1245	5.327E-03	.1224	.1500	0	0
12	168.9	7.649	6.525E-03	.1500	7.368E-03	.1693	7.246E-03	.1665	.1500	30.0000	
13	161.0	5.756	4.878E-03	.1121	5.503E-03	.1265	5.413F-03	.1244	.1500	45.5000	
17	165.0	5.567	4.734E-03	.1088	5.343E-03	.1228	5.277E-03	.1213	.2000		.1070
19	146.5	4.810	4.027E-03	.0925	4.536E-03	.1042	4.477E-03	.1029	.2250		0
20	146.2	5.170	4.327E-03	.0994	4.874E-03	.1120	4.826E-03	.1109	.2500		0
22	149.4	5.051	4.239E-03	.0974	4.776E-03	.1098	4.733E-03	.1088	.2750		0
24	163.9	5.371	4.563E-03	.1049	5.149E-03	.1183	5.102E-03	.1173	.3000	34.0000	
25	168.3	5.683	4.846E-03	.1114	5.472E-03	.1258	5.422F-03	.1246	.3000	40.0000	
26	173.1	5.858	5.016E-03	.1153	5.666E-03	.1302	5.614E-03	.1290	.3000	45.0000	
29	163.8	4.526	3.845E-03	.0884	4.339E-03	.0997	4.299E-03	.0988	.3250		0
30	159.3	3.769	3.189E-03	.0733	3.597E-03	.0827	3.565E-03	.0819	.3500		0
31	165.7	4.000	3.403E-03	.0782	3.842E-03	.0883	3.807E-03	.0875	.4000		0
32	174.0	4.051	3.472E-03	.0798	3.922E-03	.0901	3.886E-03	.0893	.4000		.1070
33	170.8	3.949	3.375E-03	.0776	3.812E-03	.0876	3.777E-03	.0868	.4500		0
34	164.8	4.073	3.463E-03	.0796	3.908E-03	.0898	3.873E-03	.0890	.5000		0
35	173.1	3.601	3.083E-03	.0709	3.483E-03	.0801	3.451E-03	.0793	.5000		.1070
37	166.2	3.802	3.236E-03	.0744	3.653E-03	.0840	3.620F-03	.0832	.5500		0
38	164.6	4.140	3.520E-03	.0809	3.972E-03	.0913	3.936E-03	.0905	.6000		0
39	172.1	3.916	3.350E-03	.0770	3.784E-03	.0870	3.750E-03	.0862	.6000		.1070
40	168.7	4.170	3.558E-03	.0818	4.017E-03	.0923	3.980E-03	.0915	.6500		0
41	171.6	4.479	3.830E-03	.0880	4.326E-03	.0994	4.287E-03	.0985	.7000		0
43	181.6	4.918	4.242E-03	.0975	4.797E-03	.1103	4.753E-03	.1092	.7500		0
44	194.4	6.299	5.446E-03	.1252	6.161E-03	.1416	6.103F-03	.1403	.8000		0
45	192.8	5.155	4.490E-03	.1032	5.084E-03	.1168	5.036E-03	.1157	.8000		.1070
46	190.9	7.096	6.170E-03	.1418	6.985E-03	.1605	6.956E-03	.1599	.8500		0
47	186.0	7.611	6.589E-03	.1514	7.455E-03	.1713	7.457E-03	.1714	.9000		0
48	190.8	6.478	5.583E-03	.1283	6.313E-03	.1451	6.314E-03	.1451	.9000		.1070
49	185.2	7.424	6.423E-03	.1476	7.266E-03	.1670	7.300F-03	.1678	.9500		0
50	190.9	7.966	6.867E-03	.1578	7.764E-03	.1785	7.823E-03	.1798	1.0000		0
51	190.9	6.869	5.973E-03	.1373	6.761E-03	.1554	6.813F-03	.1566	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
39	1		8.00	676.8	1341	30.09	.09	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.1	.069	3.10[illegible]	3864	5.987E-05	7.821E-08	2.958E 06	4.351E-02	2.363E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	189.7	5.390	4.682E-03	.1076	5.299E-03	.1218	5.170E-03	.1188	.0820	.2500
53	189.2	4.448	3.862E-03	.0888	4.371E-03	.1004	4.308E-03	.0990	.3020	.2500
54	178.2	3.907	3.360E-03	.0772	3.798E-03	.0873	3.742E-03	.0860	.4470	.2500
55	171.8	3.943	3.373E-03	.0775	3.810E-03	.0876	3.759E-03	.0864	.5910	.2500
56	194.8	5.146	4.490E-03	.1032	5.085E-03	.1169	5.054E-03	.1162	.7360	.2500
57	187.5	6.280	5.445E-03	.1251	6.161E-03	.1416	6.138E-03	.1411	.8810	.2500
58	194.5	9.568	8.345E-03	.1918	9.451E-03	.2172	9.081E-03	.2087	.0500	.4000
59	184.0	7.838	6.774E-03	.1557	7.662E-03	.1761	7.439E-03	.1710	.1000	.4000
60	171.9	6.078	5.199E-03	.1195	5.873E-03	.1350	5.726E-03	.1316	.2000	.4000
61	166.0	5.682	4.835E-03	.1111	5.458E-03	.1254	5.342E-03	.1228	.3000	.4000
62	181.5	5.667	4.888E-03	.1123	5.527E-03	.1270	5.442E-03	.1251	.5600	.4000
63	175.7	6.420	5.509E-03	.1266	6.226E-03	.1431	6.160E-03	.1416	.7000	.4000
64	158.4	5.767	4.877E-03	.1121	5.500E-03	.1264	5.545E-03	.1274	.9000	.4000
65	190.6	8.418	7.318E-03	.1682	8.283E-03	.1904	8.106E-03	.1863	.1760	.5000
66	179.4	6.502	5.598E-03	.1287	6.328E-03	.1454	6.184E-03	.1421	.4840	.5000
82	166.7	6.101	5.195E-03	.1194	5.865E-03	.1348	5.795E-03	.1332	.7000	.5000
67	150.8	5.431	4.563E-03	.1049	5.142E-03	.1182	5.191E-03	.1193	.9000	.5000
68	195.7	10.632	9.284E-03	.2134	1.051E-02	.2417	1.027E-02	.2361	.1000	.6000
69	191.7	8.613	7.494E-03	.1722	8.484E-03	.1950	8.294E-03	.1906	.2000	.6000
70	182.1	7.555	6.519E-03	.1498	7.372E-03	.1694	7.193E-03	.1653	.4300	.6000
71	161.7	5.866	4.974E-03	.1143	5.612E-03	.1290	5.515E-03	.1268	.6000	.6000
72	148.5	4.247	3.562E-03	.0819	4.013E-03	.0922	4.009E-03	.0921	.8000	.6000
73	149.4	4.507	3.783E-03	.0869	4.263E-03	.0980	4.301E-03	.0989	.9000	.6000
74	241.8	21.545	1.960E-02	.4505	2.232E-02	.5131	2.176E-02	.5000	.1000	.7500
75	180.2	7.614	6.559E-03	.1508	7.416E-03	.1704	7.240E-03	.1664	.3000	.7500
76	170.6	6.492	5.547E-03	.1275	6.265E-03	.1440	6.129E-03	.1409	.5000	.7500
77	158.7	5.988	5.065E-03	.1164	5.713E-03	.1313	5.652E-03	.1299	.7000	.7500
78	144.7	4.504	3.765E-03	.0865	4.240E-03	.0975	4.275E-03	.0983	.9000	.7500
79	211.6	15.897	1.408E-02	.3235	1.597E-02	.3671	1.556E-02	.3576	.1000	.8500
80	229.8	20.258	1.823E-02	.4190	2.073E-02	.4765	2.021E-02	.4644	.3000	.8500
81	223.8	19.996	1.790E-02	.4114	2.034E-02	.4675	1.988E-02	.4570	.5000	.8500
83	193.2	11.979	1.044E-02	.2399	1.182E-02	.2716	1.151E-02	.2645	.1000	.9500
84	192.4	14.034	1.222E-02	.2808	1.383E-02	.3179	1.354E-02	.3113	.5000	.9500
85	187.4	13.833	1.199E-02	.2756	1.357E-02	.3119	1.367E-02	.3141	.9000	.9500

AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
40	1		8.00	676.7	1342	33.90	3.90	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.3	.069	3.105	3866	5.980E-05	7.830E-08	2.953E 06	4.352E-02	2.365E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	172.3	7.514	6.424E-03	.1476	7.256E-03	.1667	5.473E-03	.1258	.0050		0
4	244.7	23.432	2.175E-02	.4998	2.485E-02	.5709	2.131E-02	.4897	.0120		0
2	225.7	17.387	1.558E-02	.3579	1.770E-02	.4068	1.585E-02	.3642	.0200		0
3	196.5	13.140	1.147E-02	.2636	1.299E-02	.2986	1.206E-02	.2772	.0400		0
6	179.5	10.027	8.625E-03	.1982	9.751E-03	.2241	9.203E-03	.2115	.0600		0
7	170.4	8.704	7.430E-03	.1707	8.391E-03	.1928	8.014E-03	.1841	.0800		0
8	167.9	8.187	6.973E-03	.1602	7.873E-03	.1809	7.572E-03	.1740	.1000		0
10	159.6	6.643	5.619E-03	.1291	6.338E-03	.1456	6.150E-03	.1413	.1500	0	0
12	179.3	8.286	7.126E-03	.1637	8.056E-03	.1851	7.812E-03	.1795	.1500	30.0000	
13	171.4	5.613	4.795E-03	.1102	5.416E-03	.1244	5.253E-03	.1207	.1500	45.5000	
17	175.7	6.407	5.493E-03	.1262	6.207E-03	.1426	6.048E-03	.1390	.2000		.1070
19	153.1	5.605	4.715E-03	.1083	5.315E-03	.1221	5.177E-03	.1189	.2250		0
20	154.0	5.743	4.834E-03	.1111	5.450E-03	.1252	5.327E-03	.1224	.2500		0
22	159.1	5.620	4.751E-03	.1092	5.359E-03	.1231	5.242E-03	.1205	.2750		0
24	170.7	6.127	5.231E-03	.1202	5.907E-03	.1357	5.778E-03	.1328	.3000	34.0000	
25	180.2	6.277	5.403E-03	.1242	6.109E-03	.1404	5.973E-03	.1373	.3000	40.0000	
26	189.8	6.173	5.358E-03	.1231	6.064E-03	.1393	5.928E-03	.1362	.3000	45.0000	
29	170.3	4.799	4.096E-03	.0941	4.625E-03	.1063	4.524E-03	.1039	.3250		
30	144.6	3.380	2.871E-03	.0660	3.240E-03	.0745	3.169E-03	.0728	.3500		0
31	146.9	4.623	3.935E-03	.0904	4.442E-03	.1021	4.344E-03	.0998	.4000		0
32	148.3	4.795	4.086E-03	.0939	4.613E-03	.1060	4.512E-03	.1037	.4000		0
33	145.8	4.571	3.886E-03	.0893	4.386E-03	.1008	4.290E-03	.0986	.4500		.1070
34	142.4	4.942	4.190E-03	.0963	4.728E-03	.1086	4.625E-03	.1063	.5000		0
35	145.4	4.285	3.642E-03	.0837	4.111E-03	.0945	4.021E-03	.0924	.5000		0
37	147.6	4.538	3.864E-03	.0888	4.362E-03	.1002	4.267E-03	.0980	.5500		.1070
38	172.7	4.840	4.139E-03	.0951	4.676E-03	.1074	4.573E-03	.1051	.6000		0
39	178.0	4.466	3.837E-03	.0882	4.337E-03	.0995	4.241E-03	.0974	.6000		0
40	179.4	5.107	4.393E-03	.1009	4.966E-03	.1141	4.856E-03	.1116	.6500		.1070
41	188.7	5.983	5.187E-03	.1192	5.870E-03	.1349	5.739E-03	.1319	.7000		0
43	212.2	9.680	8.568E-03	.1969	9.723E-03	.2234	9.501E-03	.2183	.7500		0
44	221.9	13.345	1.191E-02	.2738	1.354E-02	.3110	1.322F-02	.3038	.8000		0
45	209.1	7.600	6.708E-03	.1541	7.609E-03	.1748	7.436E-03	.1709	.8000		.1070
46	225.3	13.680	1.225E-02	.2815	1.392E-02	.3199	1.368F-02	.3144	.8500		0
47	209.3	12.753	1.126E-02	.2587	1.277E-02	.2935	1.262F-02	.2899	.9000		0
48	197.1	9.798	8.558E-03	.1966	9.694E-03	.2228	9.577E-03	.2201	.9000		.1070
49	203.4	11.329	9.950E-03	.2286	1.128E-02	.2592	1.120F-02	.2573	.9500		0
50	197.9	10.829	9.465E-03	.2175	1.072E-02	.2464	1.068E-02	.2454	1.0000		0
51	208.4	9.352	8.250E-03	.1896	9.358E-03	.2150	9.321F-03	.2142	1.0000		.2140

AEDC(AHO•INC•) ARNOLD AFS• TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-2108A

GROUP	CONFIG	MODEL	MACH NO	PO•PSIA	TO•DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
40	1		8.00	676.7	1342	33.90	3.90	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.3	.069	3.105	3866	5.980E-05	7.830E-08	2.953E 06	4.352E-02	2.365E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	190.7	5.909	5.132E-03	.1179	5.809E-03	.1335	5.586E-03	.1284	.0820	.2500
53	192.5	4.986	4.300E-03	.0988	4.863E-03	.1117	4.729E-03	.1087	.3020	.2500
54	194.4	4.381	3.785E-03	.0870	4.281E-03	.0984	4.160E-03	.0956	.4470	.2500
55	199.6	4.949	4.294E-03	.0987	4.860E-03	.1117	4.730E-03	.1087	.5910	.2500
56	207.6	7.441	6.560E-03	.1507	7.440E-03	.1710	7.297E-03	.1677	.7360	.2500
57	203.3	8.919	7.833E-03	.1800	8.879E-03	.2040	8.733E-03	.2007	.8810	.2500
58	201.4	8.887	7.791E-03	.1790	8.830E-03	.2029	8.349E-03	.1918	.0500	.4000
59	194.9	7.576	6.605E-03	.1518	7.480E-03	.1719	7.152E-03	.1643	.1000	.4000
60	188.8	6.305	5.468E-03	.1256	6.188E-03	.1422	5.943E-03	.1366	.2000	.4000
61	191.8	6.458	5.566E-03	.1279	6.294E-03	.1446	6.071E-03	.1395	.3000	.4000
62	197.3	7.416	6.423E-03	.1476	7.268E-03	.1670	7.057E-03	.1622	.5600	.4000
63	198.2	7.829	6.785E-03	.1559	7.678E-03	.1764	7.495E-03	.1722	.7000	.4000
64	172.0	8.183	6.994E-03	.1607	7.900E-03	.1815	7.876E-03	.1810	.9000	.4000
65	200.1	8.066	7.064E-03	.1623	8.004E-03	.1839	7.718E-03	.1773	.1760	.5000
66	192.8	7.580	6.539E-03	.1503	7.395E-03	.1699	7.123E-03	.1637	.4840	.5000
82	191.2	7.219	6.219E-03	.1429	7.032E-03	.1616	6.855E-03	.1575	.7000	.5000
67	171.0	7.403	6.322E-03	.1453	7.140E-03	.1641	7.131E-03	.1639	.9000	.5000
68	208.5	11.078	9.774E-03	.2246	1.109E-02	.2547	1.067E-02	.2452	.1000	.6000
69	198.0	9.360	8.182E-03	.1880	9.270E-03	.2130	8.930E-03	.2052	.2000	.6000
70	184.2	8.469	7.315E-03	.1681	8.274E-03	.1901	7.956E-03	.1828	.4300	.6000
71	169.6	7.592	6.476E-03	.1488	7.313E-03	.1680	7.087E-03	.1628	.6000	.6000
72	169.0	6.212	5.296E-03	.1217	5.980E-03	.1374	5.900E-03	.1356	.8000	.6000
73	165.9	7.071	6.012E-03	.1381	6.787E-03	.1559	6.774E-03	.1556	.9000	.6000
74	219.4	13.082	1.165E-02	.2678	1.324E-02	.3041	1.271E-02	.2922	.1000	.7500
75	185.4	8.286	7.164E-03	.1646	8.104E-03	.1862	7.797E-03	.1792	.3000	.7500
76	177.5	7.193	6.177E-03	.1419	6.982E-03	.1604	6.734E-03	.1547	.5000	.7500
77	170.8	5.996	5.119E-03	.1176	5.782E-03	.1329	5.645E-03	.1297	.7000	.7500
78	161.9	5.954	5.045E-03	.1159	5.693E-03	.1309	5.677E-03	.1304	.9000	.7500
79	259.9	23.315	2.155E-02	.4951	2.460E-02	.5652	2.356E-02	.5413	.1000	.8500
80	203.1	11.264	9.891E-03	.2273	1.121E-02	.2576	1.078E-02	.2476	.3000	.8500
81	193.2	8.320	7.180E-03	.1650	8.120E-03	.1866	7.833E-03	.1800	.5000	.8500
83	223.9	16.290	1.457E-02	.3348	1.656E-02	.3804	1.587E-02	.3647	.1000	.9500
84	220.8	15.149	1.619E-02	.3720	1.839E-02	.4225	1.773E-02	.4074	.5000	.9500
85	206.9	15.834	1.395E-02	.3205	1.582E-02	.3635	1.575E-02	.3619	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
41	1		8.00	677.8	1342	25.15	-4.85	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.3	.069	3.110	3866	5.988E-05	7.832E-08	2.956E 06	4.356E-02	2.363E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
.1	158.8	5.844	4.939E-03	.1134	5.571E-03	.1279	4.440E-03	.1019	.0050		0
4	242.3	21.834	1.985E-02	.4558	2.261E-02	.5192	2.039E-02	.4681	.0120		0
2	203.9	15.739	1.383E-02	.3175	1.568E-02	.3599	1.466E-02	.3366	.0200		0
3	176.9	11.285	9.686E-03	.2224	1.095E-02	.2513	1.056E-02	.2423	.0400		0
6	163.4	8.044	6.825E-03	.1567	7.702E-03	.1768	7.527E-03	.1728	.0600		0
7	154.6	6.783	5.712E-03	.1311	6.440E-03	.1479	6.355E-03	.1459	.0800		0
8	149.1	6.454	5.410E-03	.1242	6.096E-03	.1399	6.050E-03	.1389	.1000		0
10	139.6	4.994	4.153E-03	.0953	4.675E-03	.1073	4.672E-03	.1072	.1500	0	0
12	168.7	6.370	5.429E-03	.1246	6.130E-03	.1407	6.126E-03	.1406	.1500	30.0000	
13	172.8	4.909	4.199E-03	.0964	4.743E-03	.1089	4.740E-03	.1088	.1500	45.5000	
17	162.4	5.109	4.331E-03	.0994	4.887E-03	.1122	4.902E-03	.1125	.2000		.1070
19	142.4	3.534	2.946E-03	.0676	3.317E-03	.0761	3.324E-03	.0763	.2250		0
20	142.7	3.754	3.130E-03	.0719	3.524E-03	.0809	3.542E-03	.0813	.2500		0
22	147.8	3.708	3.105E-03	.0713	3.498E-03	.0803	3.518E-03	.0808	.2750		0
24	156.5	5.127	4.324E-03	.0993	4.877E-03	.1119	4.905E-03	.1126	.3000	34.0000	
25	166.1	5.038	4.284E-03	.0983	4.836E-03	.1110	4.864E-03	.1117	.3000	40.0000	
26	177.5	5.110	4.388E-03	.1007	4.959E-03	.1138	4.989E-03	.1145	.3000	45.0000	
29	160.4	3.153	2.668E-03	.0613	3.010E-03	.0691	3.028E-03	.0695	.3250		0
30	157.0	2.395	2.021E-03	.0464	2.279E-03	.0523	2.293E-03	.0526	.3500		0
31	157.8	3.135	2.647E-03	.0608	2.985E-03	.0685	3.003E-03	.0689	.4000		0
32	159.2	3.422	2.893E-03	.0664	3.263E-03	.0749	3.282E-03	.0753	.4000		.1070
33	157.1	3.103	2.619E-03	.0601	2.953E-03	.0678	2.970E-03	.0682	.4500		0
34	152.0	3.261	2.740E-03	.0629	3.088E-03	.0709	3.106E-03	.0713	.5000		0
35	155.9	3.078	2.595E-03	.0596	2.926E-03	.0672	2.943E-03	.0676	.5000		.1070
37	157.3	3.106	2.622E-03	.0602	2.957E-03	.0679	2.974E-03	.0683	.5500		0
38	156.2	3.184	2.685E-03	.0616	3.028E-03	.0695	3.045E-03	.0699	.6000		0
39	160.5	3.017	2.554E-03	.0586	2.881E-03	.0661	2.898E-03	.0665	.6000		.1070
40	163.2	3.056	2.593E-03	.0595	2.926E-03	.0672	2.943E-03	.0676	.6500		0
41	162.5	3.137	2.659E-03	.0611	3.001E-03	.0689	3.019E-03	.0693	.7000		0
43	172.2	3.058	2.614E-03	.0600	2.953E-03	.0678	2.971E-03	.0682	.7500		0
44	174.7	2.873	2.462E-03	.0565	2.781E-03	.0638	2.798E-03	.0642	.8000		0
45	179.1	2.975	2.559E-03	.0587	2.892E-03	.0664	2.910E-03	.0668	.8000		.1070
46	174.5	2.846	2.438E-03	.0560	2.755E-03	.0632	2.784E-03	.0639	.8500		0
47	173.1	2.931	2.508E-03	.0576	2.833E-03	.0650	2.873E-03	.0660	.9000		0
48	178.4	2.465	2.119E-03	.0486	2.395E-03	.0550	2.429E-03	.0558	.9000		.1070
49	171.8	2.803	2.395E-03	.0550	2.705E-03	.0621	2.754E-03	.0632	.9500		0
50	166.3	3.040	2.586E-03	.0594	2.919E-03	.0670	2.979E-03	.0684	1.0000		0
51	187.7	3.851	3.336E-03	.0766	3.775E-03	.0867	3.853E-03	.0885	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21HA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
41	1		8.00	677.8	1342	25.15	-4.85	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
97.3	.069	3.110	3866	5.988E-05	7.832E-08	2.956E 06	4.356E-02	2.363E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	177.3	5.269	4.524E-03	.1039	5.113E-03	.1174	5.076E-03	.1165	.0820	.2500
53	172.5	3.946	3.374E-03	.0775	3.811E-03	.0875	3.817E-03	.0876	.3020	.2500
54	167.5	3.270	2.784E-03	.0639	3.143E-03	.0722	3.146E-03	.0722	.4470	.2500
55	166.1	3.095	2.632E-03	.0604	2.971E-03	.0682	2.978E-03	.0684	.5910	.2500
56	184.6	3.361	2.904E-03	.0667	3.285E-03	.0754	3.314F-03	.0761	.7360	.2500
57	195.1	3.703	3.200E-03	.0735	3.620E-03	.0831	3.660E-03	.0840	.8810	.2500
58	196.1	10.023	8.746E-03	.2008	9.906E-03	.2274	9.699E-03	.2227	.0500	.4000
59	184.2	7.425	6.413E-03	.1472	7.254E-03	.1665	7.168E-03	.1646	.1000	.4000
60	171.9	5.613	4.797E-03	.1101	5.419E-03	.1244	5.374F-03	.1234	.2000	.4000
61	164.1	5.173	4.392E-03	.1008	4.957E-03	.1138	4.932F-03	.1132	.3000	.4000
62	167.2	4.445	3.784E-03	.0869	4.272E-03	.0981	4.274E-03	.0981	.5600	.4000
63	163.6	4.775	4.052E-03	.0930	4.573E-03	.1050	4.594F-03	.1055	.7000	.4000
64	161.3	3.500	2.964E-03	.0681	3.345E-03	.0768	3.414F-03	.0784	.9000	.4000
65	135.7	7.712	6.670E-03	.1531	7.545E-03	.1732	7.509F-03	.1724	.1760	.5000
66	172.6	5.759	4.925E-03	.1131	5.564E-03	.1277	5.530E-03	.1269	.4840	.5000
82	171.8	5.447	4.654E-03	.1068	5.257E-03	.1207	5.276E-03	.1211	.7000	.5000
67	159.6	4.266	3.608E-03	.0828	4.069E-03	.0934	4.159F-03	.0955	.9000	.5000
68	180.1	6.915	5.952E-03	.1366	6.729E-03	.1545	6.688E-03	.1535	.1000	.6000
69	168.4	5.204	4.434E-03	.1018	5.007E-03	.1149	4.979F-03	.1143	.2000	.6000
70	166.1	3.967	3.374E-03	.0775	3.808E-03	.0874	3.780E-03	.0868	.4300	.6000
71	156.2	5.288	4.460E-03	.1024	5.029E-03	.1154	5.021F-03	.1153	.6000	.6000
72	158.9	3.413	2.885E-03	.0662	3.254E-03	.0747	3.296E-03	.0757	.8000	.6000
73	159.7	3.594	3.040E-03	.0698	3.429E-03	.0787	3.503E-03	.0804	.9000	.6000
74	203.0	13.261	1.164E-02	.2673	1.320E-02	.3030	1.310E-02	.3008	.1000	.7500
75	203.9	13.574	1.193E-02	.2738	1.352E-02	.3104	1.342E-02	.3082	.3000	.7500
76	198.6	13.459	1.177E-02	.2702	1.334E-02	.3062	1.327F-02	.3045	.5000	.7500
77	177.7	7.605	6.532E-03	.1500	7.383E-03	.1695	7.416E-03	.1703	.7000	.7500
78	178.8	8.007	6.884E-03	.1580	7.782E-03	.1786	7.948E-03	.1825	.9000	.7500
79	201.1	12.855	1.127E-02	.2587	1.277E-02	.2932	1.266E-02	.2907	.1000	.8500
80	178.3	9.279	7.973E-03	.1830	9.013E-03	.2069	8.947E-03	.2054	.3000	.8500
81	202.4	15.758	1.383E-02	.3174	1.567E-02	.3598	1.559E-02	.3580	.5000	.8500
83	204.1	13.367	1.175E-02	.2697	1.332E-02	.3057	1.320E-02	.3030	.1000	.9500
84	168.5	6.936	5.911E-03	.1357	6.674E-03	.1532	6.645E-03	.1526	.5000	.9500
85	184.3	9.919	8.568E-03	.1967	9.691E-03	.2225	9.887E-03	.2270	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
42	1		7.99	548.0	1321	30.08	.08	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.9	.057	2.529	3835	4.950E-05	7.723E-08	2.457E 06	3.916E-02	2.595E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	159.8	6.354	5.472E-03	.1397	6.174E-03	.1577	4.777E-03	.1220	.0050		0
4	242.1	20.334	1.885E-02	.4813	2.148E-02	.5484	1.886E-02	.4817	.0120		0
2	205.8	15.049	1.349E-02	.3446	1.531E-02	.3909	1.399E-02	.3572	.0200		0
3	181.0	10.794	9.468E-03	.2418	1.071E-02	.2735	1.012E-02	.2584	.0400		0
6	167.1	7.957	6.896E-03	.1761	7.788E-03	.1989	7.470E-03	.1908	.0600		0
7	159.6	6.898	5.939E-03	.1517	6.702E-03	.1711	6.498E-03	.1659	.0800		0
8	157.3	6.385	5.486E-03	.1401	6.189E-03	.1580	6.040E-03	.1542	.1000		0
10	146.9	5.172	4.405E-03	.1125	4.964E-03	.1268	4.883E-03	.1247	.1500	0	0
12	168.9	6.649	5.771E-03	.1474	6.519E-03	.1665	6.411E-03	.1637	.1500	30.0000	
13	149.2	4.715	4.093E-03	.1045	4.623E-03	.1181	4.547E-03	.1161	.1500	45.5000	
17	165.5	4.913	4.252E-03	.1086	4.801E-03	.1226	4.741E-03	.1211	.2000		.1070
19	141.3	4.154	3.521E-03	.0899	3.965E-03	.1013	3.914E-03	.1000	.2250		0
20	145.5	4.119	3.504E-03	.0895	3.948E-03	.1008	3.909E-03	.0998	.2500		0
22	151.4	4.030	3.445E-03	.0880	3.884E-03	.0992	3.849E-03	.0983	.2750		0
24	162.9	4.743	4.096E-03	.1046	4.623E-03	.1181	4.581E-03	.1170	.3000	34.0000	
25	148.8	4.980	4.322E-03	.1104	4.882E-03	.1247	4.837E-03	.1235	.3000	40.0000	
26	178.1	5.023	4.395E-03	.1122	4.969E-03	.1269	4.923E-03	.1257	.3000	45.0000	
29	169.2	3.307	2.871E-03	.0733	3.243E-03	.0828	3.214E-03	.0821	.3250		0
30	167.4	2.497	2.165E-03	.0553	2.445E-03	.0624	2.423E-03	.0619	.3500		0
31	163.7	3.489	3.015E-03	.0770	3.403E-03	.0869	3.373E-03	.0861	.4000		0
32	164.4	3.632	3.141E-03	.0802	3.545E-03	.0905	3.513E-03	.0897	.4000		.1070
33	158.0	3.520	3.026E-03	.0773	3.414E-03	.0872	3.383E-03	.0864	.4500		0
34	149.4	3.777	3.224E-03	.0823	3.633E-03	.0928	3.601E-03	.0920	.5000		0
35	161.4	3.168	2.732E-03	.0698	3.083E-03	.0787	3.055E-03	.0780	.5000		.1070
37	154.4	3.410	2.923E-03	.0746	3.296E-03	.0842	3.267E-03	.0834	.5500		0
38	156.8	3.521	3.024E-03	.0772	3.412E-03	.0871	3.381E-03	.0863	.6000		0
39	162.0	3.305	2.851E-03	.0728	3.218E-03	.0822	3.189E-03	.0814	.6000		.1070
40	159.9	3.530	3.040E-03	.0776	3.430E-03	.0876	3.399E-03	.0868	.6500		0
41	160.1	3.554	3.062E-03	.0782	3.455E-03	.0882	3.423E-03	.0874	.7000		0
43	165.9	3.543	3.067E-03	.0783	3.463E-03	.0884	3.432E-03	.0876	.7500		0
44	166.6	3.869	3.351E-03	.0856	3.784E-03	.0966	3.750E-03	.0958	.8000		0
45	177.1	3.621	3.166E-03	.0808	3.579E-03	.0914	3.546F-03	.0905	.8000		.1070
46	172.8	4.047	3.525E-03	.0900	3.983E-03	.1017	3.967E-03	.1013	.8500		0
47	167.3	4.345	3.767E-03	.0962	4.254E-03	.1086	4.255F-03	.1087	.9000		0
48	163.7	4.310	3.724E-03	.0951	4.204E-03	.1073	4.205F-03	.1074	.9000		.1070
49	168.4	4.305	3.735E-03	.0954	4.218E-03	.1077	4.238E-03	.1082	.9500		0
50	144.2	4.829	4.174E-03	.1066	4.712E-03	.1203	4.748E-03	.1212	1.0000		0
51	175.3	4.189	3.656E-03	.0934	4.133E-03	.1055	4.164E-03	.1063	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A.

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
42	1		7.99	548.0	1321	30.08	.08	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.9	.057	2.529	3835	4.950E-05	7.723E-08	2.457E 06	3.916E-02	2.595E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	192.7	4.836	4.248E-03	.1085	4.806E-03	.1227	4.690E-03	.1198	.0820	.2500
53	185.9	3.712	3.271E-03	.0835	3.701E-03	.0945	3.648E-03	.0932	.3020	.2500
54	170.7	3.392	2.949E-03	.0753	3.331E-03	.0851	3.283E-03	.0838	.4470	.2500
55	165.4	3.111	2.692E-03	.0687	3.039E-03	.0776	2.999E-03	.0766	.5910	.2500
56	182.1	3.678	3.229E-03	.0825	3.653E-03	.0933	3.631E-03	.0927	.7360	.2500
57	175.3	3.967	3.463E-03	.0884	3.914E-03	.1000	3.900E-03	.0996	.8810	.2500
58	190.2	8.419	7.445E-03	.1901	8.430E-03	.2153	8.101E-03	.2069	.0500	.4000
59	179.3	7.076	6.198E-03	.1583	7.009E-03	.1790	6.806E-03	.1738	.1000	.4000
60	169.1	5.279	4.583E-03	.1170	5.177E-03	.1322	5.048E-03	.1289	.2000	.4000
61	161.6	4.909	4.234E-03	.1081	4.779E-03	.1220	4.677E-03	.1194	.3000	.4000
62	165.9	4.975	4.306E-03	.1100	4.863E-03	.1242	4.789E-03	.1223	.5600	.4000
63	166.7	4.489	3.889E-03	.0993	4.392E-03	.1121	4.346E-03	.1110	.7000	.4000
64	149.3	4.188	3.574E-03	.0913	4.028E-03	.1029	4.061E-03	.1037	.9000	.4000
65	182.3	7.576	6.653E-03	.1699	7.526E-03	.1922	7.366E-03	.1881	.1760	.5000
66	166.6	6.061	5.250E-03	.1341	5.928E-03	.1514	5.795E-03	.1480	.4840	.5000
82	165.0	4.720	4.083E-03	.1043	4.610E-03	.1177	4.555E-03	.1163	.7000	.5000
67	149.9	4.320	3.689E-03	.0942	4.158E-03	.1062	4.198E-03	.1072	.9000	.5000
68	186.3	9.853	8.683E-03	.2217	9.827E-03	.2510	9.603E-03	.2452	.1000	.6000
69	180.6	7.658	6.715E-03	.1715	7.595E-03	.1940	7.427E-03	.1897	.2000	.6000
70	168.8	6.885	5.976E-03	.1526	6.750E-03	.1724	6.587E-03	.1682	.4300	.6000
71	154.7	5.389	4.621E-03	.1180	5.211E-03	.1331	5.121E-03	.1308	.6000	.6000
72	150.4	3.615	3.088E-03	.0789	3.481E-03	.0889	3.478E-03	.0888	.8000	.6000
73	151.2	3.629	3.103E-03	.0792	3.497E-03	.0893	3.529E-03	.0901	.9000	.6000
74	227.4	18.730	1.713E-02	.4374	1.948E-02	.4975	1.899E-02	.4850	.1000	.7500
75	171.4	6.918	6.017E-03	.1537	6.798E-03	.1736	6.638E-03	.1695	.3000	.7500
76	162.6	5.753	4.966E-03	.1268	5.605E-03	.1431	5.485E-03	.1401	.5000	.7500
77	159.3	4.750	4.089E-03	.1044	4.613E-03	.1178	4.564E-03	.1165	.7000	.7500
78	154.7	3.727	3.195E-03	.0816	3.604E-03	.0920	3.633E-03	.0928	.9000	.7500
79	205.1	12.611	1.130E-02	.2886	1.282E-02	.3273	1.249E-02	.3189	.1000	.8500
80	214.6	16.853	1.523E-02	.3890	1.730E-02	.4417	1.687E-02	.4307	.3000	.8500
81	208.5	17.877	1.607E-02	.4103	1.823E-02	.4656	1.783E-02	.4554	.5000	.8500
83	187.7	10.356	9.138E-03	.2333	1.034E-02	.2641	1.008E-02	.2573	.1000	.9500
84	196.6	11.644	1.026E-02	.2621	1.162E-02	.2967	1.137E-02	.2905	.5000	.9500
85	186.0	11.343	9.994E-03	.2552	1.131E-02	.2888	1.139E-02	.2909	.9000	.9500

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AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
43	1		7.99	549.4	1317	35.16	5.16	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.6	.057	2.535	3829	4.976E-05	7.701E-08	2.474E 06	3.919E-02	2.588E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	142.5	6.690	5.794E-03	.1479	6.540E-03	.1669	4.904E-03	.1251	.0050		0
4	249.5	21.511	2.015E-02	.5142	2.299E-02	.5865	1.961E-02	.5004	.0120		0
2	212.1	16.047	1.452E-02	.3706	1.649E-02	.4208	1.468E-02	.3746	.0200		0
3	197.1	11.638	1.030E-02	.2628	1.166E-02	.2975	1.077E-02	.2747	.0400		0
6	172.4	9.002	7.864E-03	.2007	8.887E-03	.2268	8.344E-03	.2129	.0600		0
7	164.4	7.881	6.837E-03	.1745	7.719E-03	.1970	7.336E-03	.1872	.0800		0
8	161.6	7.347	6.359E-03	.1623	7.178E-03	.1831	6.870E-03	.1753	.1000		0
10	153.3	5.914	5.082E-03	.1297	5.731E-03	.1462	5.535E-03	.1412	.1500	0	0
12	167.9	7.579	6.596E-03	.1683	7.449E-03	.1901	7.191E-03	.1835	.1500	30.0000	
13	157.0	5.315	4.582E-03	.1169	5.169E-03	.1319	4.991E-03	.1274	.1500	45.5000	
17	162.8	5.989	5.189E-03	.1324	5.857E-03	.1495	5.682E-03	.1450	.2000		.1070
19	148.2	4.881	4.176E-03	.1066	4.706E-03	.1201	4.563E-03	.1164	.2250		0
20	148.9	5.118	4.381E-03	.1118	4.938E-03	.1260	4.806E-03	.1226	.2500		0
22	151.3	4.969	4.262E-03	.1088	4.805E-03	.1226	4.680E-03	.1194	.2750		0
24	159.4	5.631	4.864E-03	.1241	5.488E-03	.1400	5.344E-03	.1364	.3000	34.0000	
25	164.3	5.887	5.107E-03	.1303	5.766E-03	.1471	5.614E-03	.1433	.3000	40.0000	
26	149.3	5.795	5.049E-03	.1288	5.704E-03	.1455	5.552E-03	.1417	.3000	45.0000	
29	157.9	4.643	4.006E-03	.1022	4.519E-03	.1153	4.401E-03	.1123	.3250		0
30	149.5	3.284	2.813E-03	.0718	3.170E-03	.0809	3.088E-03	.0788	.3500		0
31	156.1	4.133	3.560E-03	.0908	4.016E-03	.1025	3.911E-03	.0998	.4000		0
32	156.5	4.400	3.792E-03	.0968	4.277E-03	.1091	4.165E-03	.1063	.4000		.1070
33	156.0	4.090	3.523E-03	.0899	3.974E-03	.1014	3.870E-03	.0988	.4500		0
34	151.6	4.198	3.603E-03	.0919	4.062E-03	.1036	3.956E-03	.1009	.5000		0
35	151.0	3.829	3.284E-03	.0838	3.703E-03	.0945	3.606E-03	.0920	.5000		.1070
37	155.6	4.095	3.526E-03	.0900	3.976E-03	.1015	3.873E-03	.0988	.5500		0
38	160.2	4.217	3.645E-03	.0930	4.114E-03	.1050	4.006E-03	.1022	.6000		0
39	161.3	3.949	3.417E-03	.0872	3.856E-03	.0984	3.755E-03	.0958	.6000		.1070
40	167.7	4.360	3.794E-03	.0968	4.285E-03	.1093	4.172E-03	.1064	.6500		0
41	173.9	4.590	4.015E-03	.1025	4.538E-03	.1158	4.417E-03	.1127	.7000		0
43	178.6	4.624	4.061E-03	.1036	4.593E-03	.1172	4.470E-03	.1141	.7500		0
44	176.3	4.953	4.342E-03	.1108	4.909E-03	.1253	4.778E-03	.1219	.8000		0
45	184.9	4.748	4.194E-03	.1070	4.746E-03	.1211	4.619E-03	.1178	.8000		.1070
46	179.4	5.531	4.862E-03	.1241	5.499E-03	.1403	5.383E-03	.1374	.8500		0
47	175.5	5.986	5.244E-03	.1338	5.928E-03	.1513	5.832E-03	.1488	.9000		0
48	179.4	5.239	4.605E-03	.1175	5.208E-03	.1329	5.124E-03	.1307	.9000		.1070
49	177.0	6.131	5.378E-03	.1372	6.080E-03	.1551	6.013E-03	.1534	.9500		0
50	173.7	6.911	6.045E-03	.1542	6.832E-03	.1743	6.778E-03	.1730	1.0000		0
51	182.5	6.337	5.586E-03	.1425	6.320E-03	.1613	6.270E-03	.1600	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
43	1		7.99	549.4	1317	35.16	5.16	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.6	.057	2.535	3829	4.976E-05	7.701E-08	2.474E 06	3.919E-02	2.588E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	172.6	5.432	4.747E-03	.1211	5.364E-03	.1369	5.135E-03	.1310	.0820	.2500
53	160.8	5.015	4.338E-03	.1107	4.895E-03	.1249	4.740E-03	.1210	.3020	.2500
54	163.8	3.995	3.464E-03	.0884	3.911E-03	.0998	3.785E-03	.0966	.4470	.2500
55	172.4	4.003	3.498E-03	.0892	3.953E-03	.1009	3.830E-03	.0977	.5910	.2500
56	193.1	5.363	4.730E-03	.1207	5.352E-03	.1366	5.227E-03	.1334	.7360	.2500
57	181.4	5.661	4.985E-03	.1272	5.639E-03	.1439	5.523E-03	.1409	.8810	.2500
58	193.7	8.293	7.318E-03	.1867	8.280E-03	.2113	7.792E-03	.1988	.0500	.4000
59	179.2	7.144	6.279E-03	.1602	7.101E-03	.1812	6.758E-03	.1724	.1000	.4000
60	177.4	5.814	5.102E-03	.1302	5.768E-03	.1472	5.514E-03	.1407	.2000	.4000
61	171.4	5.764	5.031E-03	.1284	5.685E-03	.1451	5.457E-03	.1393	.3000	.4000
62	169.8	5.437	4.739E-03	.1209	5.354E-03	.1366	5.176E-03	.1321	.5600	.4000
63	168.3	5.713	4.974E-03	.1269	5.618E-03	.1433	5.461E-03	.1393	.7000	.4000
64	159.2	5.082	4.390E-03	.1120	4.953E-03	.1264	4.919E-03	.1255	.9000	.4000
65	186.7	7.270	6.432E-03	.1641	7.280E-03	.1858	6.987E-03	.1783	.1760	.5000
66	171.8	6.038	5.272E-03	.1345	5.958E-03	.1520	5.711E-03	.1457	.4840	.5000
82	162.7	5.559	4.816E-03	.1229	5.437E-03	.1387	5.277E-03	.1347	.7000	.5000
67	154.5	5.337	4.591E-03	.1172	5.178E-03	.1321	5.151E-03	.1314	.9000	.5000
68	198.1	10.916	9.756E-03	.2490	1.106E-02	.2822	1.059E-02	.2703	.1000	.6000
69	186.9	8.156	7.217E-03	.1842	8.169E-03	.2085	7.833E-03	.1999	.2000	.6000
70	193.8	11.204	9.975E-03	.2545	1.130E-02	.2883	1.081E-02	.2757	.4300	.6000
71	172.8	9.663	8.445E-03	.2155	9.543E-03	.2435	9.202E-03	.2348	.6000	.6000
72	154.8	5.056	4.350E-03	.1110	4.906E-03	.1252	4.821E-03	.1230	.8000	.6000
73	155.9	4.857	4.183E-03	.1067	4.719E-03	.1204	4.691E-03	.1197	.9000	.6000
74	203.7	12.360	1.110E-02	.2833	1.259E-02	.3213	1.204E-02	.3072	.1000	.7500
75	180.9	7.790	6.857E-03	.1750	7.756E-03	.1979	7.425E-03	.1895	.3000	.7500
76	174.4	7.119	6.231E-03	.1590	7.043E-03	.1797	6.759E-03	.1725	.5000	.7500
77	154.0	5.208	4.478E-03	.1143	5.050E-03	.1288	4.909E-03	.1253	.7000	.7500
78	153.0	5.663	4.865E-03	.1241	5.486E-03	.1400	5.449E-03	.1390	.9000	.7500
79	232.4	20.135	1.856E-02	.4737	2.113E-02	.5392	2.015E-02	.5142	.1000	.8500
80	200.3	12.875	1.153E-02	.2942	1.307E-02	.3336	1.250E-02	.3189	.3000	.8500
81	206.5	15.971	1.438E-02	.3670	1.632E-02	.4164	1.565E-02	.3992	.5000	.8500
83	205.3	14.352	1.291E-02	.3294	1.465E-02	.3737	1.397E-02	.3566	.1000	.9500
84	200.3	15.364	1.376E-02	.3511	1.560E-02	.3980	1.497E-02	.3820	.5000	.9500
85	189.8	12.877	1.142E-02	.2915	1.293E-02	.3300	1.282E-02	.3272	.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
44	1		7.99	548.3	1319	25.09	-4.91	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.8	.057	2.530	3832	4.959E-05	7.713E-08	2.464E 06	3.917E-02	2.592E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	147.9	4.984	4.256E-03	.1087	4.796E-03	.1224	3.830E-03	.0978	.0050		0
4	227.4	19.696	1.804E-02	.4606	2.052E-02	.5239	1.853E-02	.4731	.0120		0
2	192.6	13.920	1.236E-02	.3155	1.400E-02	.3573	1.310E-02	.3345	.0200		0
3	169.7	9.614	8.365E-03	.2136	9.450E-03	.2413	9.116E-03	.2327	.0400		0
6	157.8	6.864	5.911E-03	.1509	6.668E-03	.1702	6.519E-03	.1664	.0600		0
7	151.7	5.819	4.985E-03	.1273	5.620E-03	.1435	5.546E-03	.1416	.0800		0
8	149.5	5.282	4.516E-03	.1153	5.090E-03	.1300	5.053E-03	.1290	.1000		0
10	140.0	4.020	3.409E-03	.0870	3.839E-03	.0980	3.837E-03	.0980	.1500		0
12	152.3	6.133	5.257E-03	.1342	5.927E-03	.1513	5.924E-03	.1512	.1500	0	0
13	147.1	5.095	4.348E-03	.1110	4.899E-03	.1251	4.896E-03	.1250	.1500	30.0000	
17	146.6	4.556	3.886E-03	.0992	4.379E-03	.1118	4.392E-03	.1121	.1500	45.5000	
19	135.5	3.165	2.674E-03	.0683	3.009E-03	.0768	3.017E-03	.0770	.2000		.1070
20	134.5	3.370	2.845E-03	.0726	3.202E-03	.0817	3.218E-03	.0822	.2250		0
22	137.3	3.324	2.813E-03	.0718	3.167E-03	.0808	3.185E-03	.0813	.2500		0
24	145.5	4.207	3.585E-03	.0915	4.038E-03	.1031	4.063E-03	.1037	.2750		0
25	149.0	4.480	3.829E-03	.0977	4.315E-03	.1102	4.341E-03	.1108	.3000	34.0000	
26	154.6	4.789	4.113E-03	.1050	4.638E-03	.1184	4.666E-03	.1191	.3000	40.0000	
29	146.4	2.841	2.423E-03	.0618	2.730E-03	.0697	2.746E-03	.0701	.3000	45.0000	
30	140.7	1.955	1.659E-03	.0423	1.868E-03	.0477	1.879E-03	.0480	.3250		
31	147.6	2.701	2.305E-03	.0589	2.598E-03	.0663	2.614E-03	.0667	.3500		0
32	146.8	3.016	2.573E-03	.0657	2.900E-03	.0740	2.917E-03	.0745	.4000		0
33	148.7	2.564	2.191E-03	.0559	2.469E-03	.0630	2.484E-03	.0634	.4000		0
34	140.2	2.828	2.399E-03	.0613	2.702E-03	.0690	2.718E-03	.0694	.4500		.1070
35	142.9	2.688	2.286E-03	.0584	2.575E-03	.0657	2.590E-03	.0661	.5000		0
37	139.1	2.850	2.416E-03	.0617	2.720E-03	.0694	2.736E-03	.0699	.5000		0
38	141.2	2.767	2.349E-03	.0600	2.646E-03	.0675	2.661E-03	.0679	.5500		.1070
39	142.2	2.790	2.370E-03	.0605	2.670E-03	.0682	2.686E-03	.0686	.6000.		0
40	148.2	2.647	2.261E-03	.0577	2.548E-03	.0650	2.563E-03	.0654	.6000		0
41	148.0	2.602	2.222E-03	.0567	2.504E-03	.0639	2.519E-03	.0643	.6500		.1070
43	156.2	2.484	2.136E-03	.0545	2.410E-03	.0615	2.424E-03	.0619	.7000		0
44	154.0	2.331	2.001E-03	.0511	2.256E-03	.0576	2.270E-03	.0579	.7500		0
45	162.0	2.395	2.070E-03	.0528	2.336E-03	.0596	2.351E-03	.0600	.8000		0
46	157.8	2.188	1.884E-03	.0481	2.126E-03	.0543	2.148E-03	.0548	.8000		.1070
47	159.5	2.036	1.756E-03	.0448	1.981E-03	.0506	2.009E-03	.0513	.8500		0
48	163.3	1.773	1.534E-03	.0392	1.732E-03	.0442	1.756E-03	.0448	.9000		0
49	162.4	1.745	1.509E-03	.0385	1.703E-03	.0435	1.733E-03	.0443	.9000		.1070
50	157.1	1.777	1.530E-03	.0391	1.726E-03	.0441	1.761E-03	.0450	.9500		0
51	168.5	2.361	2.052E-03	.0524	2.318E-03	.0592	2.366E-03	.0604	1.0000		0
									1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
44	1		7.99	548.3	1319	25.09	-4.91	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.8	.057	2.530	3832	4.959E-05	7.713E-08	2.464E 06	3.917E-02	2.592E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TC)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	161.3	4.534	3.916E-03	.1000	4.420E-03	.1128	4.389E-03	.1121	.0820	.2500
53	153.8	3.617	3.104E-03	.0792	3.500E-03	.0894	3.506E-03	.0895	.3020	.2500
54	148.1	2.908	2.483E-03	.0634	2.799E-03	.0714	2.802E-03	.0715	.4470	.2500
55	150.6	2.478	2.121E-03	.0542	2.391E-03	.0610	2.397E-03	.0612	.5910	.2500
56	164.9	2.678	2.320E-03	.0592	2.619E-03	.0669	2.643E-03	.0675	.7360	.2500
57	165.2	2.526	2.190E-03	.0559	2.472E-03	.0631	2.499E-03	.0638	.8810	.2500
58	193.0	8.831	7.774E-03	.1985	8.795E-03	.2245	8.615E-03	.2199	.0500	.4000
59	169.9	6.703	5.833E-03	.1489	6.589E-03	.1682	6.514E-03	.1663	.1000	.4000
60	156.0	4.991	4.291E-03	.1096	4.840E-03	.1236	4.802E-03	.1226	.2000	.4000
61	151.3	4.420	3.785E-03	.0966	4.268E-03	.1089	4.247E-03	.1084	.3000	.4000
62	155.6	3.740	3.215E-03	.0821	3.626E-03	.0926	3.628E-03	.0926	.5600	.4000
63	152.9	3.576	3.067E-03	.0783	3.458E-03	.0883	3.475E-03	.0887	.7000	.4000
64	145.6	2.561	2.182E-03	.0557	2.459E-03	.0628	2.510E-03	.0641	.9000	.4000
65	172.0	6.848	5.970E-03	.1524	6.746E-03	.1722	6.715E-03	.1714	.1760	.5000
66	160.3	5.038	4.348E-03	.1110	4.907E-03	.1253	4.878E-03	.1245	.4840	.5000
82	155.1	4.783	4.110E-03	.1049	4.635E-03	.1183	4.652E-03	.1188	.7000	.5000
67	143.1	3.559	3.026E-03	.0773	3.409E-03	.0870	3.483E-03	.0889	.9000	.5000
68	168.4	6.212	5.399E-03	.1378	6.098E-03	.1557	6.062E-03	.1548	.1000	.6000
69	159.3	4.419	3.811E-03	.0973	4.300E-03	.1098	4.277E-03	.1092	.2000	.6000
70	155.7	3.830	3.292E-03	.0840	3.713E-03	.0948	3.687E-03	.0941	.4300	.6000
71	147.7	4.298	3.669E-03	.0937	4.135E-03	.1056	4.129E-03	.1054	.6000	.6000
72	142.2	3.139	2.667E-03	.0681	3.004E-03	.0767	3.042E-03	.0777	.8000	.6000
73	144.9	3.229	2.750E-03	.0702	3.098E-03	.0791	3.165E-03	.0808	.9000	.6000
74	187.9	11.630	1.028E-02	.2625	1.164E-02	.2971	1.156E-02	.2951	.1000	.7500
75	185.9	11.220	9.903E-03	.2528	1.121E-02	.2861	1.113E-02	.2842	.3000	.7500
76	172.6	8.538	7.447E-03	.1901	8.416E-03	.2149	8.373E-03	.2138	.5000	.7500
77	171.4	8.997	7.840E-03	.2001	8.858E-03	.2261	8.899E-03	.2272	.7000	.7500
78	169.3	9.113	7.927E-03	.2024	8.954E-03	.2286	9.145E-03	.2335	.9000	.7500
79	184.4	11.332	9.988E-03	.2550	1.130E-02	.2885	1.121E-02	.2862	.1000	.8500
80	166.2	7.656	6.641E-03	.1695	7.499E-03	.1914	7.446E-03	.1901	.3000	.8500
81	186.5	13.048	1.154E-02	.2946	1.306E-02	.3334	1.300E-02	.3318	.5000	.8500
83	190.6	11.719	1.039E-02	.2652	1.176E-02	.3003	1.166E-02	.2976	.1000	.9500
84	152.7	5.774	4.951E-03	.1264	5.582E-03	.1425	5.560E-03	.1419	.5000	.9500
85	163.5	8.529	7.381E-03	.1884	8.332E-03	.2127	8.499E-03	.2170	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
45	1		7.99	545.4	1323	30.18	.18	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.1	.056	2.517	3038	4.918E-05	7.737E-08	2.439E 06	3.908E-02	2.604E-02	1

GAGE	TW	GDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	156.5	6.046	5.183E-03	.1326	5.846E-03	.1496	4.524E-03	.1158	.0050		0
4	241.4	20.321	1.879E-02	.4808	2.141E-02	.5478	1.880E-02	.4809	.0120		0
2	205.7	14.713	1.317E-02	.3369	1.494E-02	.3822	1.364E-02	.3491	.0200		0
3	180.5	10.661	9.331E-03	.2388	1.055E-02	.2700	9.967E-03	.2551	.0400		0
6	166.8	7.913	6.845E-03	.1751	7.729E-03	.1978	7.411E-03	.1896	.0600		0
7	160.5	6.774	5.828E-03	.1491	6.576E-03	.1683	6.374E-03	.1631	.0800		0
8	157.6	6.203	5.323E-03	.1362	6.004E-03	.1536	5.857E-03	.1499	.1000		0
10	147.4	5.012	4.263E-03	.1091	4.804E-03	.1229	4.724E-03	.1209	.1500	0	0
12	163.1	6.734	5.806E-03	.1486	6.553E-03	.1677	6.443E-03	.1649	.1500	30.0000	
13	157.7	4.928	4.229E-03	.1082	4.770E-03	.1221	4.691E-03	.1200	.1500	45.5000	
17	155.9	5.330	4.567E-03	.1169	5.150E-03	.1318	5.086E-03	.1301	.2000		.1070
19	144.6	3.880	3.292E-03	.0842	3.709E-03	.0949	3.660E-03	.0936	.2250		0
20	146.8	3.938	3.348E-03	.0857	3.772E-03	.0965	3.734E-03	.0955	.2500		0
22	149.5	3.894	3.318E-03	.0849	3.740E-03	.0957	3.705E-03	.0948	.2750		0
24	156.3	4.812	4.125E-03	.1055	4.652E-03	.1190	4.609E-03	.1179	.3000	34.0000	
25	161.1	5.022	4.322E-03	.1106	4.878E-03	.1248	4.832E-03	.1236	.3000	40.0000	
26	157.3	5.056	4.375E-03	.1119	4.940E-03	.1264	4.894E-03	.1252	.3000	45.0000	
29	154.9	3.483	2.981E-03	.0763	3.362E-03	.0860	3.331E-03	.0852	.3250		
30	148.8	2.374	2.021E-03	.0517	2.278E-03	.0583	2.257E-03	.0578	.3500		0
31	150.3	3.524	3.005E-03	.0769	3.387E-03	.0867	3.355E-03	.0859	.4000		0
32	150.9	3.643	3.108E-03	.0795	3.504E-03	.0897	3.471E-03	.0888	.4000		0
33	151.0	3.383	2.887E-03	.0739	3.254E-03	.0833	3.224E-03	.0825	.4500		.1070
34	147.2	3.539	3.010E-03	.0770	3.391E-03	.0868	3.360E-03	.0860	.5000		0
35	147.6	3.331	2.834E-03	.0725	3.194E-03	.0817	3.164E-03	.0810	.5000		0
37	150.5	3.312	2.825E-03	.0723	3.184E-03	.0815	3.154E-03	.0807	.5500		.1070
38	153.8	3.363	2.876E-03	.0736	3.243E-03	.0830	3.213E-03	.0822	.6000		0
39	155.8	3.286	2.815E-03	.0720	3.175E-03	.0812	3.145E-03	.0805	.6000		0
40	157.9	3.441	2.954E-03	.0756	3.332E-03	.0853	3.301E-03	.0845	.6500		.1070
41	158.7	3.399	2.919E-03	.0747	3.293E-03	.0843	3.262E-03	.0835	.7000		0
43	168.2	3.404	2.947E-03	.0754	3.329E-03	.0852	3.297E-03	.0844	.7500		0
44	165.2	3.703	3.198E-03	.0818	3.611E-03	.0924	3.577E-03	.0915	.8000		0
45	172.9	3.609	3.138E-03	.0803	3.546E-03	.0907	3.513E-03	.0899	.8000		.1070
46	170.7	3.770	3.272E-03	.0837	3.696E-03	.0946	3.680E-03	.0942	.8500		0
47	166.7	4.165	3.602E-03	.0922	4.067E-03	.1041	4.067E-03	.1041	.9000		0
48	162.0	4.441	3.825E-03	.0979	4.317E-03	.1105	4.317E-03	.1105	.9000		.1070
49	169.8	4.190	3.633E-03	.0930	4.104E-03	.1050	4.122E-03	.1055	.9500		0
50	166.5	4.636	4.009E-03	.1026	4.526E-03	.1158	4.559E-03	.1167	1.0000		0
51	178.1	5.126	4.477E-03	.1146	5.062E-03	.1295	5.100E-03	.1305	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
45	1		7.99	545.4	1323	30.18	.18	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
96.1	.056	2.517	3038	4.918E-05	7.737E-08	2.439E 06	3.908E-02	2.604E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	166.6	4.935	4.267E-03	.1092	4.819E-03	.1233	4.702E-03	.1203	.0820	.2500
53	160.3	4.217	3.627E-03	.0928	4.092E-03	.1047	4.034E-03	.1032	.3020	.2500
54	159.4	3.387	2.910E-03	.0745	3.284E-03	.0840	3.235E-03	.0828	.4470	.2500
55	160.6	3.098	2.665E-03	.0682	3.007E-03	.0769	2.967E-03	.0759	.5910	.2500
56	178.9	3.693	3.228E-03	.0826	3.650E-03	.0934	3.627E-03	.0928	.7360	.2500
57	178.4	5.933	5.184E-03	.1326	5.861E-03	.1500	5.838E-03	.1494	.8810	.2500
58	194.4	8.517	7.480E-03	.1914	8.464E-03	.2166	8.132E-03	.2081	.0500	.4000
59	174.1	7.076	6.158E-03	.1576	6.960E-03	.1781	6.757E-03	.1729	.1000	.4000
60	164.0	5.315	4.586E-03	.1173	5.176E-03	.1325	5.046E-03	.1291	.2000	.4000
61	160.4	4.795	4.125E-03	.1055	4.654E-03	.1191	4.554E-03	.1165	.3000	.4000
62	159.6	4.364	3.784E-03	.0968	4.274E-03	.1094	4.207E-03	.1077	.5600	.4000
63	168.3	6.338	5.489E-03	.1404	6.199E-03	.1586	6.132E-03	.1569	.7000	.4000
64	167.2	7.736	6.693E-03	.1713	7.559E-03	.1934	7.619E-03	.1950	.9000	.4000
65	176.4	7.635	6.659E-03	.1704	7.528E-03	.1926	7.365E-03	.1885	.1760	.5000
66	170.1	5.715	4.957E-03	.1268	5.599E-03	.1433	5.470E-03	.1400	.4840	.5000
82	162.7	4.660	4.016E-03	.1028	4.533E-03	.1160	4.478E-03	.1146	.7000	.5000
67	156.5	4.006	3.434E-03	.0879	3.873E-03	.0991	3.910E-03	.1000	.9000	.5000
68	184.6	9.322	8.189E-03	.2096	9.266E-03	.2371	9.052E-03	.2316	.1000	.6000
69	193.1	8.042	7.055E-03	.1805	7.981E-03	.2042	7.801E-03	.1996	.2000	.6000
70	171.3	6.808	5.911E-03	.1513	6.679E-03	.1709	6.515E-03	.1667	.4300	.6000
71	154.1	4.706	4.026E-03	.1030	4.540E-03	.1162	4.460E-03	.1141	.6000	.6000
72	149.9	3.498	2.982E-03	.0763	3.361E-03	.0860	3.356E-03	.0859	.8000	.6000
73	156.6	3.421	2.933E-03	.0750	3.308E-03	.0846	3.337E-03	.0854	.9000	.6000
74	218.7	16.498	1.494E-02	.3823	1.697E-02	.4343	1.654E-02	.4233	.1000	.7500
75	169.4	6.840	5.929E-03	.1517	6.697E-03	.1714	6.537E-03	.1673	.3000	.7500
76	169.5	7.483	6.487E-03	.1660	7.328E-03	.1875	7.167E-03	.1834	.5000	.7500
77	180.3	12.604	1.103E-02	.2823	1.247E-02	.3192	1.234E-02	.3156	.7000	.7500
78	171.6	9.405	8.168E-03	.2090	9.229E-03	.2361	9.304E-03	.2381	.9000	.7500
79	199.3	12.342	1.098E-02	.2810	1.245E-02	.3185	1.213E-02	.3103	.1000	.8500
80	212.0	17.133	1.542E-02	.3946	1.751E-02	.4479	1.706E-02	.4366	.3000	.8500
81	208.7	17.785	1.596E-02	.4084	1.811E-02	.4634	1.770E-02	.4530	.5000	.8500
83	189.8	10.268	9.061E-03	.2318	1.026E-02	.2625	9.988E-03	.2556	.1000	.9500
84	188.1	11.859	1.045E-02	.2674	1.183E-02	.3027	1.158E-02	.2962	.5000	.9500
85	191.0	11.324	1.000E-02	.2560	1.133E-02	.2898	1.140E-02	.2918	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-21HA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
46	1		7.98	425.8	1302	30.09	.09	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FH (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.8	.044	1.976	3807	3.923E-05	7.633E-08	1.957E 06	3.453E-02	2.911E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	151.0	5.583	4.850E-03	.1405	5.469E-03	.1584	4.237E-03	.1227	.0050		0
4	224.7	18.636	1.730E-02	.5010	1.968E-02	.5698	1.731E-02	.5014	.0120		0
2	192.3	13.407	1.208E-02	.3499	1.369E-02	.3964	1.252E-02	.3625	.0200		0
3	170.8	9.563	8.454E-03	.2448	9.554E-03	.2767	9.031E-03	.2615	.0400		0
6	156.8	7.194	6.282E-03	.1819	7.088E-03	.2053	6.800E-03	.1969	.0600		0
7	148.8	6.256	5.424E-03	.1571	6.115E-03	.1771	5.930E-03	.1717	.0800		0
8	145.2	5.802	5.016E-03	.1453	5.652E-03	.1637	5.516E-03	.1598	.1000		0
10	137.4	4.740	4.070E-03	.1179	4.582E-03	.1327	4.508E-03	.1306	.1500	0	0
12	156.2	6.170	5.385E-03	.1559	6.075E-03	.1759	5.975E-03	.1730	.1500	30.0000	
13	156.0	4.421	3.858E-03	.1117	4.353E-03	.1261	4.281E-03	.1240	.1500	45.5000	
17	154.4	4.702	4.097E-03	.1187	4.621E-03	.1338	4.565E-03	.1322	.2000		.1070
19	134.8	3.685	3.157E-03	.0914	3.553E-03	.1029	3.508E-03	.1016	.2250		0
20	134.4	3.753	3.214E-03	.0931	3.617E-03	.1048	3.582E-03	.1037	.2500		0
22	140.6	3.722	3.205E-03	.0928	3.610E-03	.1045	3.577E-03	.1036	.2750		0
24	153.2	4.329	3.769E-03	.1091	4.250E-03	.1231	4.212E-03	.1220	.3000	34.0000	
25	162.8	4.423	3.882E-03	.1124	4.383E-03	.1269	4.343E-03	.1258	.3000	40.0000	
26	172.9	4.381	3.880E-03	.1124	4.385E-03	.1270	4.345E-03	.1258	.3000	45.0000	
29	155.9	3.248	2.851E-03	.0826	3.217E-03	.0932	3.187E-03	.0923	.3250		0
30	153.8	2.814	2.451E-03	.0710	2.764E-03	.0801	2.739E-03	.0793	.3500		0
31	148.0	3.340	2.929E-03	.0848	3.302E-03	.0956	3.272E-03	.0948	.4000		0
32	154.6	3.431	2.990E-03	.0866	3.373E-03	.0977	3.342E-03	.0968	.4000		.1070
33	150.7	3.110	2.702E-03	.0782	3.046E-03	.0882	3.019E-03	.0874	.4500		0
34	142.3	3.478	2.999E-03	.0868	3.378E-03	.0978	3.348E-03	.0969	.5000		0
35	158.4	2.991	2.616E-03	.0757	2.952E-03	.0855	2.925E-03	.0847	.5000		.1070
37	145.9	3.167	2.740E-03	.0793	3.087E-03	.0894	3.060E-03	.0886	.5500		0
38	148.2	3.021	2.618E-03	.0758	2.951E-03	.0855	2.925E-03	.0847	.6000		0
39	159.2	2.832	2.478E-03	.0718	2.796E-03	.0810	2.771E-03	.0802	.6000		.1070
40	152.5	2.976	2.589E-03	.0750	2.920E-03	.0846	2.894E-03	.0838	.6500		0
41	153.6	2.871	2.500E-03	.0724	2.820E-03	.0817	2.794E-03	.0809	.7000		0
43	161.4	2.777	2.435E-03	.0705	2.748E-03	.0796	2.723E-03	.0789	.7500		0
44	140.2	2.911	2.549E-03	.0738	2.877E-03	.0833	2.851E-03	.0826	.8000		0
45	173.2	2.708	2.399E-03	.0695	2.712E-03	.0785	2.687E-03	.0778	.8000		.1070
46	163.1	2.621	2.301E-03	.0666	2.598E-03	.0753	2.588E-03	.0749	.8500		0
47	157.0	2.759	2.409E-03	.0698	2.719E-03	.0787	2.719E-03	.0787	.9000		0
48	154.0	3.242	2.824E-03	.0818	3.185E-03	.0922	3.186E-03	.0923	.9000		.1070
49	158.6	2.526	2.209E-03	.0640	2.493E-03	.0722	2.505E-03	.0725	.9500		0
50	152.5	2.639	2.296E-03	.0665	2.589E-03	.0750	2.609E-03	.0755	1.0000		0
51	170.7	2.771	2.449E-03	.0709	2.768E-03	.0802	2.749E-03	.0808	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
46	1		7.98	425.8	1302	30.09	.09	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.8	.049	1.976	3807	3.923E-05	7.633E-08	1.957E 06	3.453E-02	2.911E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	184.0	4.259	3.809E-03	.1103	4.311E-03	.1249	4.206E-03	.1218	.0820	.2500
53	195.0	3.128	2.825E-03	.0818	3.202E-03	.0927	3.156E-03	.0914	.3020	.2500
54	169.9	2.926	2.584E-03	.0748	2.920E-03	.0846	2.877E-03	.0833	.4470	.2500
55	160.2	2.703	2.368E-03	.0686	2.673E-03	.0774	2.637E-03	.0764	.5910	.2500
56	176.6	2.717	2.414E-03	.0699	2.730E-03	.0790	2.713E-03	.0786	.7360	.2500
57	170.1	3.414	3.016E-03	.0874	3.408E-03	.0987	3.396E-03	.0983	.8810	.2500
58	183.8	7.527	6.731E-03	.1949	7.618E-03	.2206	7.321E-03	.2120	.0500	.4000
59	172.4	6.214	5.501E-03	.1593	6.217E-03	.1801	6.038E-03	.1749	.1000	.4000
60	160.1	4.704	4.120E-03	.1193	4.650E-03	.1347	4.535E-03	.1313	.2000	.4000
61	148.8	4.070	3.530E-03	.1022	3.979E-03	.1152	3.895E-03	.1128	.3000	.4000
62	159.1	3.773	3.302E-03	.0956	3.726E-03	.1079	3.670E-03	.1063	.5600	.4000
63	157.4	4.730	4.133E-03	.1197	4.663E-03	.1350	4.615E-03	.1336	.7000	.4000
64	160.7	6.601	5.784E-03	.1675	6.529E-03	.1891	6.582E-03	.1906	.9000	.4000
65	167.4	6.962	6.136E-03	.1777	6.931E-03	.2007	6.785E-03	.1965	.1760	.5000
66	155.7	5.253	4.582E-03	.1327	5.170E-03	.1497	5.054E-03	.1464	.4840	.5000
82	151.2	4.026	3.498E-03	.1013	3.944E-03	.1142	3.898E-03	.1129	.7000	.5000
67	142.4	3.375	2.910E-03	.0843	3.278E-03	.0949	3.310E-03	.0958	.9000	.5000
68	169.5	8.725	7.704E-03	.2231	8.705E-03	.2521	8.509E-03	.2464	.1000	.6000
69	147.1	6.922	6.099E-03	.1766	6.890E-03	.1995	6.738E-03	.1951	.2000	.6000
70	156.7	5.785	5.051E-03	.1463	5.698E-03	.1650	5.563E-03	.1611	.4300	.6000
71	145.8	4.310	3.727E-03	.1079	4.200E-03	.1216	4.128E-03	.1196	.6000	.6000
72	138.4	3.339	2.870E-03	.0831	3.231E-03	.0936	3.228E-03	.0935	.8000	.6000
73	142.6	2.872	2.477E-03	.0717	2.790E-03	.0808	2.815E-03	.0815	.9000	.6000
74	197.5	12.239	1.098E-02	.3180	1.243E-02	.3601	1.213E-02	.3514	.1000	.7500
75	157.5	6.006	5.248E-03	.1520	5.922E-03	.1715	5.783E-03	.1675	.3000	.7500
76	149.5	5.076	4.404E-03	.1275	4.965E-03	.1438	4.859E-03	.1407	.5000	.7500
77	144.3	4.721	4.078E-03	.1181	4.595E-03	.1331	4.546E-03	.1317	.7000	.7500
78	141.9	3.360	2.896E-03	.0839	3.262E-03	.0945	3.289E-03	.0952	.9000	.7500
79	179.1	11.313	1.007E-02	.2918	1.140E-02	.3300	1.111E-02	.3217	.1000	.8500
80	191.5	14.626	1.317E-02	.3814	1.492E-02	.4321	1.455E-02	.4215	.3000	.8500
81	181.6	12.848	1.147E-02	.3321	1.298E-02	.3758	1.269E-02	.3677	.5000	.8500
83	173.8	9.267	8.214E-03	.2379	9.285E-03	.2689	9.047E-03	.2620	.1000	.9500
84	168.9	9.767	8.620E-03	.2496	9.739E-03	.2820	9.538E-03	.2762	.5000	.9500
85	168.0	9.903	8.732E-03	.2529	9.865E-03	.2857	9.634E-03	.2877	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
47	1		7.98	425.7	1302	35.11	5.11	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.8	.044	1.975	3807	3.922E-05	7.633E-08	1.956E 06	3.453E-02	2.911E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	143.9	5.922	5.203E-03	.1507	5.876E-03	.1702	4.403E-03	.1275	.0050		0
4	238.5	16.330	1.724E-02	.4991	1.964E-02	.5688	1.678E-02	.4860	.0120		0
2	206.0	13.562	1.237E-02	.3584	1.404E-02	.4067	1.251E-02	.3624	.0200		0
3	180.9	10.600	9.455E-03	.2738	1.070E-02	.3098	9.884E-03	.2862	.0400		0
6	156.4	7.919	6.974E-03	.2020	7.877E-03	.2281	7.399E-03	.2143	.0600		0
7	158.6	6.969	6.095E-03	.1765	6.879E-03	.1992	6.539E-03	.1894	.0800		0
8	155.3	6.755	5.891E-03	.1706	6.646E-03	.1925	6.363E-03	.1843	.1000		0
10	149.0	5.241	4.546E-03	.1316	5.124E-03	.1484	4.951E-03	.1434	.1500	0	0
12	170.1	6.431	5.681E-03	.1645	6.420E-03	.1859	6.198E-03	.1795	.1500	30.0000	
13	166.5	4.360	3.840E-03	.1112	4.337E-03	.1256	4.188E-03	.1213	.1500	45.5000	
17	165.2	4.956	4.360E-03	.1263	4.924E-03	.1426	4.777E-03	.1383	.2000		.1070
19	141.9	4.435	3.823E-03	.1107	4.306E-03	.1247	4.177E-03	.1210	.2250		0
20	142.9	4.574	3.946E-03	.1143	4.445E-03	.1287	4.327E-03	.1253	.2500		0
22	147.7	4.629	4.010E-03	.1161	4.520E-03	.1309	4.403E-03	.1275	.2750		0
24	160.3	4.873	4.268E-03	.1236	4.817E-03	.1395	4.692E-03	.1359	.3000	34.0000	
25	167.9	4.989	4.399E-03	.1274	4.970E-03	.1439	4.839E-03	.1401	.3000	40.0000	
26	177.4	4.919	4.374E-03	.1267	4.947E-03	.1433	4.816E-03	.1395	.3000	45.0000	
29	163.0	3.733	3.277E-03	.0949	3.700E-03	.1072	3.603E-03	.1044	.3250		
30	160.4	2.564	2.246E-03	.0650	2.535E-03	.0734	2.469E-03	.0715	.3500		0
31	158.1	3.722	3.254E-03	.0942	3.672E-03	.1063	3.576E-03	.1036	.4000		0
32	160.9	3.681	3.226E-03	.0934	3.641E-03	.1055	3.546E-03	.1027	.4000		0
33	158.0	3.586	3.135E-03	.0908	3.537E-03	.1024	3.445E-03	.0998	.4500		.1070
34	152.7	3.776	3.286E-03	.0952	3.706E-03	.1073	3.610E-03	.1045	.5000		0
35	158.0	3.320	2.902E-03	.0840	3.275E-03	.0948	3.189E-03	.0924	.5000		0
37	158.0	3.459	3.024E-03	.0876	3.412E-03	.0988	3.323E-03	.0962	.5500		.1070
38	158.0	3.552	3.105E-03	.0899	3.504E-03	.1015	3.412E-03	.0988	.6000		0
39	163.4	3.235	2.841E-03	.0823	3.208E-03	.0929	3.124E-03	.0905	.6000		0
40	161.3	3.498	3.066E-03	.0888	3.461E-03	.1002	3.371E-03	.0976	.6500		.1070
41	162.6	3.630	3.186E-03	.0923	3.597E-03	.1042	3.502E-03	.1014	.7000		0
43	168.5	3.499	3.087E-03	.0894	3.487E-03	.1010	3.396E-03	.0983	.7500		0
44	164.2	3.512	3.086E-03	.0894	3.485E-03	.1009	3.394E-03	.0983	.8000		0
45	175.8	3.311	2.940E-03	.0851	3.325E-03	.0963	3.236E-03	.0937	.8000		.1070
46	166.9	3.319	2.924E-03	.0847	3.302E-03	.0956	3.234E-03	.0937	.8500		0
47	157.5	3.425	2.993E-03	.0867	3.377E-03	.0978	3.324E-03	.0963	.9000		0
48	159.7	3.707	3.245E-03	.0940	3.662E-03	.1061	3.604E-03	.1044	.9000		.1070
49	158.6	3.378	2.954E-03	.0856	3.334E-03	.0966	3.298E-03	.0955	.9500		0
50	155.7	3.805	3.320E-03	.0961	3.745E-03	.1085	3.717E-03	.1076	1.0000		0
51	173.0	3.608	3.196E-03	.0926	3.612E-03	.1046	3.585E-03	.1038	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
47	1		7.98	425.7	1302	35.11	5.11	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.8	.044	1.975	3807	3.922E-05	7.633E-08	1.956E 06	3.453E-02	2.911E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	180.5	4.720	4.209E-03	.1219	4.762E-03	.1379	4.557E-03	.1320	.0820	.2500
53	177.1	3.921	3.485E-03	.1009	3.942E-03	.1142	3.815E-03	.1105	.3020	.2500
54	174.3	3.184	2.823E-03	.0818	3.191E-03	.0924	3.088E-03	.0894	.4470	.2500
55	167.7	3.087	2.722E-03	.0788	3.075E-03	.0890	2.980E-03	.0863	.5910	.2500
56	177.4	3.347	2.976E-03	.0862	3.366E-03	.0975	3.289E-03	.0952	.7340	.2500
57	169.4	3.554	3.138E-03	.0909	3.546E-03	.1027	3.474E-03	.1006	.8810	.2500
58	185.6	7.352	6.586E-03	.1907	7.455E-03	.2159	7.016E-03	.2032	.0500	.2500
59	177.7	6.221	5.533E-03	.1602	6.258E-03	.1812	5.957E-03	.1725	.1000	.4000
60	170.3	5.001	4.419E-03	.1280	4.994E-03	.1446	4.776E-03	.1383	.2000	.4000
61	168.5	4.639	4.057E-03	.1175	4.578E-03	.1326	4.398E-03	.1274	.3000	.4000
62	169.8	4.227	3.700E-03	.1072	4.176E-03	.1209	4.039E-03	.1170	.5600	.4000
63	169.8	3.897	3.412E-03	.0988	3.851E-03	.1115	3.745E-03	.1085	.7000	.4000
64	169.7	3.986	3.430E-03	.0993	3.862E-03	.1119	3.837E-03	.1111	.9000	.4000
65	181.1	6.180	5.513E-03	.1597	6.238E-03	.1806	5.989E-03	.1734	.1760	.4000
66	161.3	4.934	4.326E-03	.1253	4.883E-03	.1414	4.684E-03	.1356	.4840	.5000
82	155.7	4.054	3.537E-03	.1024	3.990E-03	.1155	3.874E-03	.1122	.7000	.5000
67	142.1	4.453	3.839E-03	.1112	4.325E-03	.1252	4.303F-03	.1246	.9000	.5000
68	189.4	8.446	7.591E-03	.2198	8.597E-03	.2490	8.238E-03	.2386	.1000	.5000
69	179.4	6.854	6.105E-03	.1768	6.906E-03	.2000	6.625E-03	.1919	.2000	.6000
70	164.7	5.975	5.254E-03	.1522	5.933E-03	.1718	5.681E-03	.1645	.4300	.6000
71	150.7	5.113	4.441E-03	.1286	5.007E-03	.1450	4.832E-03	.1399	.6000	.6000
72	148.0	3.721	3.225E-03	.0934	3.635E-03	.1053	3.573E-03	.1035	.8000	.6000
73	143.7	4.158	3.590E-03	.1040	4.044E-03	.1171	4.022F-03	.1165	.9000	.6000
74	194.4	10.037	9.062E-03	.2624	1.027E-02	.2974	9.824E-03	.2845	.1000	.7500
75	165.8	6.148	5.411E-03	.1567	6.111E-03	.1770	5.855E-03	.1696	.3000	.7500
76	160.0	5.111	4.475E-03	.1296	5.051E-03	.1463	4.851F-03	.1405	.5000	.7500
77	151.6	4.530	3.938E-03	.1140	4.440E-03	.1286	4.317E-03	.1250	.7000	.7500
78	138.8	4.260	3.662E-03	.1061	4.124E-03	.1194	4.097F-03	.1187	.9000	.7500
79	212.7	14.114	1.296E-02	.3752	1.472E-02	.4262	1.405E-02	.4069	.1000	.8500
80	176.7	7.715	6.856E-03	.1986	7.753E-03	.2245	7.422E-03	.2149	.3000	.8500
81	161.4	6.054	5.307E-03	.1537	5.991E-03	.1735	5.756F-03	.1667	.5000	.8500
83	188.4	11.654	1.046E-02	.3031	1.185E-02	.3432	1.132F-02	.3277	.1000	.9500
84	184.0	12.425	1.111E-02	.3219	1.258E-02	.3643	1.204F-02	.3499	.5000	.9500
85	156.7	6.425	5.610E-03	.1625	6.329E-03	.1833	6.278E-03	.1818	.9000	.9500

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
48	1		7.98	425.2	1301	25.15	-4.85	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.7	.044	1.973	3806	3.920E-05	7.628E-08	1.956E 06	3.450E-02	2.912E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	148.2	4.555	3.951E-03	.1145	4.454E-03	.1291	3.554E-03	.1030	.0050		0
4	217.1	17.651	1.628E-02	.4720	1.851E-02	.5364	1.672E-02	.4845	.0120		0
2	184.1	12.523	1.121E-02	.3250	1.269E-02	.3678	1.188E-02	.3443	.0200		0
3	162.6	9.152	8.040E-03	.2330	9.078E-03	.2631	8.756E-03	.2538	.0400		0
6	153.8	6.256	5.453E-03	.1581	6.151E-03	.1783	6.012E-03	.1743	.0600		0
7	146.9	5.122	4.438E-03	.1286	5.002E-03	.1450	4.936E-03	.1431	.0800		0
8	140.9	4.641	4.000E-03	.1159	4.506E-03	.1306	4.471E-03	.1296	.1000		0
10	131.7	3.906	3.341E-03	.0968	3.759E-03	.1090	3.756E-03	.1089	.1500	0	0
12	154.4	5.286	4.610E-03	.1336	5.200E-03	.1507	5.196E-03	.1506	.1500	30.0000	
13	157.6	4.088	3.575E-03	.1036	4.034E-03	.1169	4.031E-03	.1168	.1500	45.5000	
17	149.8	3.990	3.466E-03	.1005	3.907E-03	.1133	3.919E-03	.1136	.2000		.1070
19	132.5	2.758	2.360E-03	.0684	2.656E-03	.0770	2.662E-03	.0772	.2250		0
20	131.2	2.931	2.505E-03	.0726	2.819E-03	.0817	2.833E-03	.0821	.2500		0
22	136.5	2.856	2.453E-03	.0711	2.762E-03	.0800	2.777E-03	.0805	.2750		0
24	144.8	3.857	3.336E-03	.0967	3.759E-03	.1090	3.781E-03	.1096	.3000	34.0000	
25	152.6	4.125	3.592E-03	.1041	4.051E-03	.1174	4.074E-03	.1181	.3000	40.0000	
26	163.1	4.190	3.683E-03	.1067	4.158E-03	.1205	4.183E-03	.1212	.3000	45.0000	
29	148.4	2.491	2.161E-03	.0626	2.436E-03	.0706	2.450E-03	.0710	.3250		
30	148.7	1.815	1.575E-03	.0457	1.776E-03	.0515	1.786E-03	.0518	.3500		0
31	146.1	2.545	2.204E-03	.0639	2.483E-03	.0720	2.498E-03	.0724	.4000		0
32	147.8	2.663	2.309E-03	.0669	2.603E-03	.0754	2.618E-03	.0759	.4000		0
33	147.0	2.403	2.082E-03	.0603	2.346E-03	.0680	2.360E-03	.0684	.4500		.1070
34	142.3	2.592	2.237E-03	.0648	2.520E-03	.0730	2.534E-03	.0735	.5000		0
35	147.3	2.377	2.060E-03	.0597	2.322E-03	.0673	2.336E-03	.0677	.5000		0
37	147.5	2.277	1.974E-03	.0572	2.225E-03	.0645	2.238E-03	.0649	.5500		.1070
38	145.2	2.446	2.116E-03	.0613	2.385E-03	.0691	2.399E-03	.0695	.6000		0
39	150.8	2.348	2.041E-03	.0592	2.301E-03	.0667	2.315E-03	.0671	.6000		0
40	150.6	2.375	2.064E-03	.0598	2.328E-03	.0675	2.341E-03	.0679	.6500		.1070
41	147.3	2.381	2.064E-03	.0598	2.326E-03	.0674	2.340E-03	.0678	.7000		0
43	154.3	2.255	1.966E-03	.0570	2.218E-03	.0643	2.231E-03	.0647	.7500		0
44	154.7	2.015	1.758E-03	.0510	1.983E-03	.0575	1.995E-03	.0578	.8000		0
45	152.4	2.202	1.934E-03	.0561	2.183E-03	.0633	2.196E-03	.0637	.8000		.1070
46	155.2	1.841	1.606E-03	.0466	1.812E-03	.0525	1.831E-03	.0531	.8500		0
47	152.5	1.732	1.508E-03	.0437	1.701E-03	.0493	1.724E-03	.0500	.9000		0
48	151.0	1.520	1.333E-03	.0386	1.505E-03	.0436	1.526E-03	.0442	.9000		.1070
49	152.7	1.544	1.345E-03	.0390	1.517E-03	.0440	1.544E-03	.0447	.9500		0
50	147.9	1.514	1.313E-03	.0381	1.480E-03	.0429	1.510E-03	.0438	1.0000		0
51	164.4	1.803	1.587E-03	.0460	1.792E-03	.0519	1.828E-03	.0530	1.0000		.2140

AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
48	1		7.98	425.2	1301	25.15	-4.85	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .0175FT)	STFR (H= .0175FT)	SWITCH POSITION
94.7	.044	1.973	3806	3.920E-05	7.628E-08	1.956E 06	3.450E-02	2.912E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	166.4	4.111	3.623E-03	.1050	4.093E-03	.1186	4.063E-03	.1178	.0820	.2500
53	165.6	3.024	2.663E-03	.0772	3.008E-03	.0872	3.012E-03	.0873	.3020	.2500
54	163.2	2.459	2.161E-03	.0626	2.440E-03	.0707	2.443E-03	.0708	.4470	.2500
55	152.7	2.320	2.020E-03	.0586	2.279E-03	.0660	2.284E-03	.0662	.5910	.2500
56	166.2	2.389	2.106E-03	.0610	2.378E-03	.0689	2.399E-03	.0695	.7360	.2500
57	164.1	2.044	1.798E-03	.0521	2.030E-03	.0588	2.052E-03	.0595	.8810	.2500
58	180.2	7.909	7.056E-03	.2045	7.983E-03	.2314	7.818E-03	.2266	.0500	.4000
59	170.3	5.899	5.217E-03	.1512	5.896E-03	.1709	5.827E-03	.1689	.1000	.4000
60	157.5	4.373	3.824E-03	.1108	4.315E-03	.1251	4.280E-03	.1241	.2000	.4000
61	146.0	3.715	3.216E-03	.0932	3.625E-03	.1051	3.607E-03	.1045	.3000	.4000
62	149.1	3.314	2.877E-03	.0834	3.243E-03	.0940	3.245E-03	.0941	.5600	.4000
63	145.1	3.458	2.992E-03	.0867	3.371E-03	.0977	3.387E-03	.0982	.7000	.4000
64	138.1	2.256	1.940E-03	.0562	2.184E-03	.0633	2.229E-03	.0646	.9000	.4000
65	170.6	5.941	5.256E-03	.1523	5.940E-03	.1722	5.911E-03	.1713	.1760	.5000
66	155.5	4.248	3.708E-03	.1075	4.183E-03	.1213	4.158E-03	.1205	.4840	.5000
82	153.1	3.962	3.451E-03	.1000	3.892E-03	.1128	3.906E-03	.1132	.7000	.5000
67	138.5	3.077	2.647E-03	.0767	2.981E-03	.0864	3.045E-03	.0883	.9000	.5000
68	165.8	5.346	4.710E-03	.1365	5.320E-03	.1542	5.288E-03	.1533	.1000	.6000
69	154.1	4.018	3.504E-03	.1016	3.952E-03	.1145	3.930E-03	.1139	.2000	.6000
70	151.1	2.939	2.556E-03	.0741	2.882E-03	.0835	2.861E-03	.0829	.4300	.6000
71	142.1	3.780	3.262E-03	.0946	3.675E-03	.1065	3.669E-03	.1064	.6000	.6000
72	142.2	2.565	2.214E-03	.0642	2.494E-03	.0723	2.525E-03	.0732	.8000	.6000
73	138.6	2.613	2.249E-03	.0652	2.531E-03	.0734	2.585E-03	.0749	.9000	.6000
74	176.6	8.849	7.869E-03	.2281	8.899E-03	.2579	8.835E-03	.2561	.1000	.7500
75	168.2	6.709	5.923E-03	.1717	6.691E-03	.1939	6.644E-03	.1926	.3000	.7500
76	151.7	4.507	3.921E-03	.1137	4.421E-03	.1282	4.399E-03	.1275	.5000	.7500
77	147.2	3.960	3.432E-03	.0995	3.868E-03	.1121	3.885E-03	.1126	.7000	.7500
78	139.9	3.282	2.827E-03	.0819	3.184E-03	.0923	3.249E-03	.0942	.9000	.7500
79	182.9	9.617	8.601E-03	.2493	9.734E-03	.2821	9.654E-03	.2798	.1000	.8500
80	156.0	5.571	4.865E-03	.1410	5.489E-03	.1591	5.449E-03	.1579	.3000	.8500
81	173.4	11.095	9.840E-03	.2852	1.112E-02	.3224	1.107E-02	.3208	.5000	.8500
83	181.6	10.286	9.189E-03	.2663	1.040E-02	.3014	1.031E-02	.2987	.1000	.9500
84	147.9	5.048	4.378E-03	.1269	4.934E-03	.1430	4.914E-03	.1424	.5000	.9500
85	154.3	6.715	5.855E-03	.1697	6.605E-03	.1914	6.735E-03	.1952	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
49	1		7.96	327.6	1287	30.09	.09	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.1	.035	1.537	3784	3.090E-05	7.576E-08	1.543E 06	3.040E-02	3.276E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	148.4	5.009	4.399E-03	.1447	4.960E-03	.1632	3.843E-03	.1264	.0050		0
4	214.6	16.271	1.517E-02	.4991	1.724E-02	.5672	1.519E-02	.4995	.0120		0
2	184.4	11.665	1.058E-02	.3480	1.198E-02	.3940	1.096E-02	.3605	.0200		0
3	164.9	8.402	7.488E-03	.2463	8.458E-03	.2782	7.996E-03	.2630	.0400		0
6	151.7	6.601	5.815E-03	.1913	6.558E-03	.2157	6.293E-03	.2070	.0600		0
7	144.6	5.667	4.961E-03	.1632	5.591E-03	.1839	5.422E-03	.1784	.0800		0
8	141.7	5.162	4.507E-03	.1483	5.078E-03	.1670	4.957E-03	.1630	.1000		0
10	135.7	4.124	3.582E-03	.1178	4.033E-03	.1327	3.968E-03	.1305	.1500	0	0
12	155.7	5.205	4.601E-03	.1513	5.191E-03	.1708	5.106E-03	.1679	.1500	30.0000	
13	157.5	3.735	3.307E-03	.1088	3.732E-03	.1228	3.671E-03	.1207	.1500	45.5000	
17	154.8	4.076	3.600E-03	.1184	4.062E-03	.1336	4.012E-03	.1320	.2000		.1070
19	132.5	3.255	2.819E-03	.0927	3.173E-03	.1044	3.132E-03	.1030	.2250		0
20	134.2	3.166	2.746E-03	.0903	3.091E-03	.1017	3.061E-03	.1007	.2500		0
22	141.2	3.103	2.708E-03	.0891	3.050E-03	.1003	3.023E-03	.0994	.2750		0
24	154.4	3.680	3.250E-03	.1069	3.666E-03	.1206	3.633E-03	.1195	.3000	34.0000	
25	162.1	3.856	3.428E-03	.1128	3.870E-03	.1273	3.835E-03	.1262	.3000	40.0000	
26	171.3	3.840	3.442E-03	.1132	3.890E-03	.1280	3.854E-03	.1268	.3000	45.0000	
29	158.8	2.664	2.361E-03	.0777	2.665E-03	.0877	2.641E-03	.0869	.3250		0
30	159.6	2.628	2.331E-03	.0767	2.631E-03	.0866	2.607E-03	.0858	.3500		0
31	151.1	2.804	2.469E-03	.0812	2.784E-03	.0916	2.759E-03	.0908	.4000		0
32	158.9	2.747	2.435E-03	.0801	2.749E-03	.0904	2.724E-03	.0896	.4000		.1070
33	149.6	2.593	2.280E-03	.0750	2.571E-03	.0846	2.548E-03	.0838	.4500		0
34	140.1	2.945	2.568E-03	.0845	2.892E-03	.0951	2.866E-03	.0943	.5000		0
35	150.0	2.510	2.208E-03	.0726	2.490E-03	.0819	2.467E-03	.0812	.5000		.1070
37	144.3	2.587	2.264E-03	.0745	2.552E-03	.0839	2.529E-03	.0832	.5500		0
38	143.4	2.634	2.303E-03	.0758	2.595E-03	.0854	2.572E-03	.0846	.6000		0
39	148.8	2.493	2.190E-03	.0720	2.469E-03	.0812	2.447E-03	.0805	.6000		.1070
40	147.2	2.565	2.251E-03	.0740	2.537E-03	.0835	2.514E-03	.0827	.6500		0
41	145.3	2.466	2.160E-03	.0711	2.435E-03	.0801	2.413E-03	.0794	.7000		0
43	151.0	2.316	2.039E-03	.0671	2.299E-03	.0756	2.279E-03	.0750	.7500		0
44	148.3	2.312	2.030E-03	.0668	2.289E-03	.0753	2.268E-03	.0746	.8000		0
45	159.1	2.339	2.074E-03	.0682	2.341E-03	.0770	2.320E-03	.0763	.8000		.1070
46	151.7	2.026	1.784E-03	.0587	2.012E-03	.0662	2.004E-03	.0659	.8500		0
47	146.5	2.031	1.781E-03	.0586	2.007E-03	.0660	2.007E-03	.0660	.9000		0
48	144.1	2.752	2.408E-03	.0792	2.714E-03	.0893	2.714E-03	.0893	.9000		.1070
49	148.9	1.713	1.505E-03	.0495	1.697E-03	.0558	1.705E-03	.0561	.9500		0
50	143.3	1.757	1.537E-03	.0505	1.731E-03	.0570	1.744E-03	.0574	1.0000		0
51	159.9	2.003	1.777E-03	.0585	2.006E-03	.0660	2.021E-03	.0665	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
49	1		7.96	327.6	1287	30.09	.09	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.1	.035	1.537	3784	3.090E-05	7.576E-08	1.543E 06	3.040E-02	3.276E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	180.9	3.632	3.284E-03	.1080	3.716E-03	.1222	3.626E-03	.1193	.0820	.2500
53	173.5	2.937	2.638E-03	.0868	2.983E-03	.0981	2.940E-03	.0967	.3020	.2500
54	157.7	2.557	2.264E-03	.0745	2.556E-03	.0841	2.519E-03	.0829	.4470	.2500
55	150.4	2.307	2.029E-03	.0668	2.289E-03	.0753	2.259E-03	.0743	.5910	.2500
56	142.3	2.316	2.060E-03	.0678	2.326E-03	.0765	2.312E-03	.0761	.7360	.2500
57	156.9	2.178	1.927E-03	.0634	2.175E-03	.0715	2.167E-03	.0713	.8810	.2500
58	173.4	6.714	6.029E-03	.1983	6.816E-03	.2242	6.553E-03	.2156	.0500	.4000
59	163.3	5.529	4.920E-03	.1618	5.556E-03	.1828	5.397E-03	.1775	.1000	.4000
60	153.0	4.127	3.639E-03	.1197	4.105E-03	.1350	4.004E-03	.1317	.2000	.4000
61	141.6	3.454	3.016E-03	.0992	3.397E-03	.1118	3.326E-03	.1094	.3000	.4000
62	148.1	3.149	2.765E-03	.0910	3.117E-03	.1025	3.070E-03	.1010	.5600	.4000
63	146.4	3.025	2.652E-03	.0872	2.989E-03	.0983	2.959E-03	.0973	.7000	.4000
64	136.6	2.285	1.986E-03	.0653	2.237E-03	.0736	2.254E-03	.0742	.9000	.4000
65	158.4	6.221	5.512E-03	.1813	6.221E-03	.2047	6.091E-03	.2004	.1760	.5000
66	147.7	4.606	4.043E-03	.1330	4.558E-03	.1499	4.457E-03	.1466	.4840	.5000
82	147.2	3.330	2.921E-03	.0961	3.293E-03	.1083	3.255E-03	.1071	.7000	.5000
67	138.1	2.762	2.404E-03	.0791	2.707E-03	.0891	2.733E-03	.0899	.9000	.5000
68	140.4	7.487	6.645E-03	.2186	7.502E-03	.2468	7.334E-03	.2413	.1000	.6000
69	158.8	6.026	5.341E-03	.1757	6.029E-03	.1983	5.897E-03	.1940	.2000	.6000
70	147.9	5.047	4.431E-03	.1457	4.995E-03	.1643	4.877E-03	.1604	.4300	.6000
71	141.0	3.471	3.079E-03	.0996	3.412E-03	.1123	3.354E-03	.1103	.6000	.6000
72	136.3	2.766	2.403E-03	.0791	2.706E-03	.0890	2.703E-03	.0889	.8000	.6000
73	141.9	2.405	2.100E-03	.0691	2.366E-03	.0778	2.387E-03	.0785	.9000	.6000
74	148.5	9.204	8.229E-03	.2707	9.299E-03	.3059	9.078E-03	.2986	.1000	.7500
75	149.0	5.191	4.562E-03	.1501	5.143E-03	.1692	5.024E-03	.1653	.3000	.7500
76	145.5	4.204	3.683E-03	.1212	4.151E-03	.1365	4.063E-03	.1336	.5000	.7500
77	142.9	3.799	3.320E-03	.1092	3.741E-03	.1231	3.702E-03	.1218	.7000	.7500
78	140.5	2.808	2.449E-03	.0806	2.759E-03	.0908	2.781E-03	.0915	.9000	.7500
79	174.1	9.561	8.591E-03	.2826	9.715E-03	.3196	9.472E-03	.3116	.1000	.8500
80	177.0	11.774	1.061E-02	.3489	1.200E-02	.3947	1.171E-02	.3851	.3000	.8500
81	160.8	9.112	8.091E-03	.2661	9.134E-03	.3005	8.941E-03	.2941	.5000	.8500
83	166.2	8.225	7.338E-03	.2414	8.290E-03	.2727	8.079E-03	.2657	.1000	.9500
84	158.8	8.040	7.126E-03	.2344	8.044E-03	.2646	7.879E-03	.2592	.5000	.9500
85	160.3	8.293	7.360E-03	.2421	8.309E-03	.2733	8.367E-03	.2752	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
50	1		7.96	325.1	1285	35.14	5.14	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.0	.034	1.526	3781	3.072E-05	7.566E-08	1.535E 06	3.028E-02	3.285E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	P(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	169.5	4.927	4.417E-03	.1459	4.992E-03	.1649	3.733E-03	.1233	.0050		0
4	230.5	15.994	1.517E-02	.5009	1.727E-02	.5704	1.477E-02	.4877	.0120		0
2	201.5	11.535	1.065E-02	.3516	1.208E-02	.3989	1.076E-02	.3554	.0200		0
3	177.8	8.943	8.078E-03	.2668	9.138E-03	.3018	8.443E-03	.2788	.0400		0
6	162.9	7.125	6.350E-03	.2097	7.171E-03	.2368	6.736E-03	.2225	.0600		0
7	154.3	6.528	5.774E-03	.1907	6.514E-03	.2151	6.193E-03	.2045	.0800		0
8	152.8	5.844	5.162E-03	.1705	5.823E-03	.1923	5.575E-03	.1841	.1000		0
10	151.4	4.309	3.801E-03	.1255	4.287E-03	.1416	4.141E-03	.1368	.1500	0	0
12	179.3	5.254	4.752E-03	.1569	5.377E-03	.1776	5.188E-03	.1713	.1500	30.0000	
13	181.6	3.437	3.115E-03	.1029	3.526E-03	.1164	3.402E-03	.1124	.1500	45.5000	
17	171.5	4.147	3.724E-03	.1230	4.210E-03	.1390	4.083E-03	.1348	.2000		.1070
19	139.6	3.967	3.463E-03	.1144	3.901E-03	.1288	3.783E-03	.1249	.2250		0
20	141.0	3.911	3.419E-03	.1129	3.851E-03	.1272	3.749E-03	.1238	.2500		0
22	145.8	3.833	3.365E-03	.1111	3.793E-03	.1253	3.694E-03	.1220	.2750		0
24	161.0	4.052	3.604E-03	.1190	4.070E-03	.1344	3.963E-03	.1309	.3000	34.0000	
25	168.3	4.262	3.816E-03	.1260	4.312E-03	.1424	4.198E-03	.1386	.3000	40.0000	
26	176.7	4.195	3.785E-03	.1250	4.282E-03	.1414	4.168E-03	.1376	.3000	45.0000	
29	164.2	2.970	2.650E-03	.0875	2.993E-03	.0988	2.914E-03	.0962	.3250		
30	166.5	2.909	2.601E-03	.0859	2.938E-03	.0970	2.861E-03	.0945	.3500		0
31	161.6	2.946	2.622E-03	.0866	2.961E-03	.0978	2.883E-03	.0952	.4000		0
32	162.3	3.040	2.708E-03	.0894	3.058E-03	.1010	2.978E-03	.0983	.4000		0
33	157.0	3.063	2.715E-03	.0897	3.064E-03	.1012	2.984E-03	.0985	.4500		.1070
34	148.8	3.228	2.841E-03	.0938	3.203E-03	.1058	3.120E-03	.1030	.5000		0
35	152.8	2.850	2.517E-03	.0831	2.840E-03	.0938	2.766E-03	.0913	.5000		0
37	152.2	2.960	2.613E-03	.0863	2.947E-03	.0973	2.870E-03	.0948	.5500		.1070
38	151.4	3.021	2.665E-03	.0880	3.005E-03	.0993	2.927E-03	.0967	.6000		0
39	156.1	2.801	2.481E-03	.0819	2.800E-03	.0925	2.726E-03	.0900	.6000		0
40	155.1	2.949	2.610E-03	.0862	2.945E-03	.0973	2.868E-03	.0947	.6500		.1070
41	154.6	2.892	2.559E-03	.0845	2.887E-03	.0953	2.812E-03	.0929	.7000		0
43	160.9	2.799	2.490E-03	.0822	2.811E-03	.0928	2.737E-03	.0904	.7500		0
44	157.6	2.754	2.443E-03	.0807	2.757E-03	.0911	2.685E-03	.0887	.8000		0
45	145.9	2.621	2.342E-03	.0773	2.646E-03	.0874	2.576E-03	.0851	.8000		.1070
46	159.0	2.498	2.219E-03	.0733	2.505E-03	.0827	2.453E-03	.0810	.8500		0
47	152.3	2.335	2.061E-03	.0681	2.325E-03	.0768	2.288E-03	.0756	.9000		0
48	152.2	2.620	2.313E-03	.0764	2.609E-03	.0862	2.568E-03	.0848	.9000		.1070
49	150.7	2.070	1.825E-03	.0603	2.058E-03	.0680	2.036E-03	.0672	.9500		0
50	146.5	2.153	1.891E-03	.0625	2.132E-03	.0704	2.116E-03	.0699	1.0000		0
51	143.6	2.273	2.027E-03	.0669	2.289E-03	.0756	2.272E-03	.0750	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
50	1		7.96	325.1	1285	35.14	5.14	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.0	.034	1.526	3781	3.072E-05	7.566E-08	1.535E 06	3.028E-02	3.285E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(STO)	H(STO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	177.4	4.074	3.678E-03	.1215	4.161E-03	.1374	3.982E-03	.1315	.0820	.2500
53	168.9	3.437	3.080E-03	.1017	3.480E-03	.1149	3.369E-03	.1113	.3020	.2500
54	166.3	2.781	2.486E-03	.0821	2.809E-03	.0928	2.718E-03	.0898	.4470	.2500
55	160.1	2.629	2.337E-03	.0772	2.639E-03	.0871	2.557E-03	.0845	.5910	.2500
56	168.3	2.647	2.370E-03	.0783	2.678E-03	.0884	2.617E-03	.0864	.7360	.2500
57	161.7	2.473	2.202E-03	.0727	2.486E-03	.0821	2.436E-03	.0804	.8810	.2500
58	179.0	6.407	5.793E-03	.1913	6.554E-03	.2165	6.169E-03	.2037	.0500	.4000
59	171.2	5.366	4.817E-03	.1591	5.445E-03	.1798	5.184E-03	.1712	.1000	.4000
60	162.3	4.294	3.825E-03	.1263	4.319E-03	.1426	4.131E-03	.1364	.2000	.4000
61	153.3	3.889	3.437E-03	.1135	3.877E-03	.1280	3.724E-03	.1230	.3000	.4000
62	152.1	3.261	2.878E-03	.0951	3.247E-03	.1072	3.140E-03	.1037	.5600	.4000
63	153.4	3.017	2.666E-03	.0880	3.008E-03	.0993	2.925E-03	.0966	.7000	.4000
64	134.4	3.294	2.863E-03	.0945	3.223E-03	.1064	3.201E-03	.1057	.9000	.4000
65	172.7	5.411	4.865E-03	.1607	5.500E-03	.1817	5.282E-03	.1744	.1760	.5000
66	153.5	4.116	3.637E-03	.1201	4.103E-03	.1355	3.936E-03	.1300	.4840	.5000
82	151.6	3.227	2.847E-03	.0940	3.211E-03	.1060	3.117E-03	.1029	.7000	.5000
67	140.0	3.147	2.748E-03	.0908	3.096E-03	.1022	3.080E-03	.1017	.9000	.5000
68	181.1	7.501	6.795E-03	.2244	7.690E-03	.2540	7.370E-03	.2434	.1000	.6000
69	169.6	6.055	5.428E-03	.1793	6.135E-03	.2026	5.886E-03	.1944	.2000	.6000
70	155.6	5.208	4.611E-03	.1523	5.203E-03	.1718	4.983E-03	.1646	.4300	.6000
71	144.8	4.366	3.829E-03	.1265	4.315E-03	.1425	4.165E-03	.1376	.6000	.6000
72	146.1	2.888	2.536E-03	.0838	2.859E-03	.0944	2.810E-03	.0928	.8000	.6000
73	142.0	3.241	2.835E-03	.0936	3.194E-03	.1055	3.176E-03	.1049	.9000	.6000
74	196.1	8.679	7.898E-03	.2608	8.944E-03	.2954	8.557E-03	.2826	.1000	.7500
75	156.8	5.460	4.839E-03	.1598	5.461E-03	.1804	5.233E-03	.1728	.3000	.7500
76	153.3	4.276	3.778E-03	.1248	4.262E-03	.1408	4.094E-03	.1352	.5000	.7500
77	150.8	3.777	3.330E-03	.1100	3.755E-03	.1240	3.651E-03	.1206	.7000	.7500
78	143.2	3.225	2.825E-03	.0933	3.183E-03	.1051	3.162E-03	.1044	.9000	.7500
79	195.2	9.926	9.108E-03	.3008	1.033E-02	.3410	9.864E-03	.3257	.1000	.8500
80	168.9	6.165	5.524E-03	.1824	6.243E-03	.2062	5.976E-03	.1974	.3000	.8500
81	155.0	5.115	4.526E-03	.1495	5.107E-03	.1687	4.907E-03	.1620	.5000	.8500
83	178.5	9.100	8.224E-03	.2716	9.304E-03	.3073	8.888E-03	.2935	.1000	.9500
84	169.4	9.621	8.628E-03	.2849	9.752E-03	.3220	9.370E-03	.3095	.5000	.9500
85	149.7	5.172	4.556E-03	.1505	5.138E-03	.1697	5.095E-03	.1683	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
51	1		7.96	324.3	1285	25.08	-4.92	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.0	.034	1.522	3781	3.064E-05	7.567E-08	1.531E 06	3.024E-02	3.289E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	154.4	3.745	3.313E-03	.1095	3.738E-03	.1236	2.979E-03	.0985	.0050		0
4	209.5	15.379	1.430E-02	.4728	1.624E-02	.5370	1.468E-02	.4855	.0120		0
2	179.3	10.759	9.730E-03	.3218	1.101E-02	.3641	1.031E-02	.3410	.0200		0
3	160.5	8.171	7.266E-03	.2403	8.204E-03	.2713	7.915E-03	.2618	.0400		0
6	156.4	5.153	4.566E-03	.1510	5.153E-03	.170:	5.037E-03	.1666	.0600		0
7	150.4	4.161	3.668E-03	.1213	4.136E-03	.1368	4.082E-03	.1350	.0800		0
8	143.4	3.789	3.319E-03	.1098	3.740E-03	.1237	3.713E-03	.1228	.1000		0
10	131.5	3.566	3.091E-03	.1022	3.479E-03	.1150	3.477E-03	.1150	.1500	0	0
12	165.1	4.257	3.801E-03	.1257	4.294E-03	.1420	4.292E-03	.1419	.1500	30.0000	
13	174.6	3.162	2.847E-03	.0942	3.220E-03	.1065	3.218E-03	.1064	.1500	45.5000	
17	157.3	3.425	3.037E-03	.1004	3.427E-03	.1133	3.438E-03	.1137	.2000		.1070
19	135.3	2.244	1.952E-03	.0645	2.197E-03	.0727	2.203E-03	.0728	.2250		0
20	133.5	2.397	2.082E-03	.0688	2.344E-03	.0775	2.356E-03	.0779	.2500		0
22	138.9	2.392	2.087E-03	.0690	2.350E-03	.0777	2.365E-03	.0782	.2750		0
24	146.0	3.362	2.952E-03	.0976	3.327E-03	.1100	3.347E-03	.1107	.3000	34.0000	
25	154.1	3.514	3.107E-03	.1027	3.505E-03	.1159	3.527E-03	.1166	.3000	40.0000	
26	155.5	3.536	3.159E-03	.1044	3.568E-03	.1180	3.590E-03	.1187	.3000	45.0000	
29	151.1	2.089	1.842E-03	.0609	2.077E-03	.0687	2.090E-03	.0691	.3250		0
30	149.2	2.160	1.902E-03	.0629	2.144E-03	.0709	2.157E-03	.0713	.3500		0
31	146.3	2.111	1.854E-03	.0613	2.089E-03	.0691	2.102E-03	.0695	.4000		0
32	148.6	2.211	1.945E-03	.0643	2.193E-03	.0725	2.207E-03	.0730	.4000		.1070
33	145.2	2.136	1.874E-03	.0620	2.112E-03	.0698	2.124E-03	.0703	.4500		0
34	138.9	2.252	1.965E-03	.0650	2.213E-03	.0732	2.227E-03	.0736	.5000		0
35	143.8	2.100	1.840E-03	.0609	2.074E-03	.0686	2.086E-03	.0690	.5000		.1070
37	143.6	2.106	1.845E-03	.0610	2.080E-03	.0688	2.092E-03	.0692	.5500		0
38	140.5	2.117	1.850E-03	.0612	2.083E-03	.0689	2.096E-03	.0693	.6000		0
39	146.1	1.998	1.755E-03	.0580	1.978E-03	.0654	1.990E-03	.0658	.6000		.1070
40	145.7	2.073	1.819E-03	.0602	2.051E-03	.0678	2.063E-03	.0682	.6500		0
41	142.9	2.004	1.755E-03	.0580	1.977E-03	.0654	1.989E-03	.0658	.7000		0
43	149.2	1.885	1.659E-03	.0549	1.871E-03	.0619	1.882E-03	.0623	.7500		0
44	146.9	1.791	1.574E-03	.0520	1.774E-03	.0587	1.785E-03	.0590	.8000		0
45	154.6	1.834	1.623E-03	.0537	1.831E-03	.0605	1.842E-03	.0609	.8000		.1070
46	148.1	1.588	1.397E-03	.0462	1.575E-03	.0521	1.592E-03	.0526	.8500		0
47	147.5	1.493	1.313E-03	.0434	1.480E-03	.0489	1.501E-03	.0496	.9000		0
48	154.9	1.243	1.100E-03	.0364	1.241E-03	.0410	1.259E-03	.0416	.9000		.1070
49	148.5	1.249	1.099E-03	.0364	1.239E-03	.0410	1.262E-03	.0417	.9500		0
50	142.1	1.188	1.039E-03	.0344	1.171E-03	.0387	1.194E-03	.0395	1.0000		0
51	159.6	1.542	1.370E-03	.0453	1.546E-03	.0511	1.578E-03	.0522	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
51	1		7.96	324.3	1285	25.08	-4.92	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	H-REF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.0	.034	1.522	3791	3.064E-05	7.567E-08	1.531E 06	3.024E-02	3.289E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	143.7	3.539	3.156E-03	.1044	3.564E-03	.1179	3.539E-03	.1170	.0820	.2500
53	140.5	2.643	2.350E-03	.0777	2.653E-03	.0877	2.658E-03	.0879	.3020	.2500
54	154.7	2.210	1.955E-03	.0646	2.206E-03	.0729	2.209E-03	.0730	.4470	.2500
55	148.9	1.941	1.708E-03	.0565	1.926E-03	.0637	1.931E-03	.0639	.5910	.2500
56	159.3	1.892	1.681E-03	.0556	1.897E-03	.0627	1.914E-03	.0633	.7360	.2500
57	158.5	1.759	1.562E-03	.0516	1.763E-03	.0583	1.782E-03	.0589	.8810	.2500
58	171.7	7.002	6.289E-03	.2080	7.110E-03	.2351	6.965E-03	.2303	.0500	.4000
59	162.1	5.148	4.585E-03	.1516	5.177E-03	.1712	5.118E-03	.1693	.1000	.4000
60	151.4	3.746	3.305E-03	.1093	3.727E-03	.1233	3.698E-03	.1223	.2000	.4000
61	142.2	3.208	2.807E-03	.0928	3.162E-03	.1046	3.148E-03	.1041	.3000	.4000
62	142.4	2.864	2.507E-03	.0829	2.825E-03	.0934	2.827E-03	.0935	.5600	.4000
63	137.8	3.156	2.751E-03	.0910	3.098E-03	.1025	3.113E-03	.1030	.7000	.4000
64	138.3	1.802	1.571E-03	.0520	1.769E-03	.0585	1.806E-03	.0597	.9000	.4000
65	161.9	5.222	4.650E-03	.1538	5.250E-03	.1736	5.227E-03	.1728	.1760	.5000
66	148.1	3.647	3.208E-03	.1061	3.617E-03	.1196	3.596E-03	.1189	.4840	.5000
82	148.2	3.333	2.932E-03	.0970	3.306E-03	.1093	3.318E-03	.1097	.7000	.5000
67	138.0	2.532	2.208E-03	.0730	2.486E-03	.0822	2.541E-03	.0840	.9000	.5000
68	156.6	4.758	4.217E-03	.1395	4.759E-03	.1574	4.732E-03	.1565	.1000	.6000
69	145.4	3.772	3.310E-03	.1094	3.730E-03	.1234	3.711E-03	.1227	.2000	.6000
70	145.0	2.755	2.417E-03	.0799	2.724E-03	.0901	2.704E-03	.0894	.4300	.6000
71	138.1	3.291	2.870E-03	.0949	3.232E-03	.1069	3.228E-03	.1067	.6000	.6000
72	140.9	2.177	1.901E-03	.0629	2.142E-03	.0708	2.169E-03	.0717	.8000	.6000
73	142.7	2.237	1.958E-03	.0648	2.207E-03	.0730	2.254E-03	.0745	.9000	.6000
74	165.4	7.569	6.761E-03	.2236	7.637E-03	.2526	7.585E-03	.2508	.1000	.7500
75	154.4	4.648	4.111E-03	.1360	4.638E-03	.1534	4.608E-03	.1524	.3000	.7500
76	144.5	3.811	3.341E-03	.1105	3.766E-03	.1245	3.747E-03	.1239	.5000	.7500
77	144.6	3.171	2.780E-03	.0919	3.134E-03	.1036	3.148E-03	.1041	.7000	.7500
78	141.9	2.772	2.425E-03	.0802	2.732E-03	.0903	2.789E-03	.0922	.9000	.7500
79	171.3	8.688	7.802E-03	.2580	8.819E-03	.2916	8.749E-03	.2893	.1000	.8500
80	143.9	5.239	4.591E-03	.1518	5.174E-03	.1711	5.138E-03	.1699	.3000	.8500
81	160.2	9.502	8.448E-03	.2794	9.538E-03	.3154	9.493E-03	.3139	.5000	.8500
83	169.0	8.594	7.701E-03	.2547	8.703E-03	.2878	8.629E-03	.2854	.1000	.9500
84	143.4	4.539	3.976E-03	.1315	4.480E-03	.1482	4.463E-03	.1476	.5000	.9500
85	151.1	5.030	4.436E-03	.1467	5.003E-03	.1655	5.103E-03	.1687	.9000	.9500

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AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
52	1		7.94	209.7	1279	30.09	.09	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.0	.023	.995	3772	2.013E-05	7.569E-08	1.003E 06	2.444E-02	4.056E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	141.5	4.028	3.541E-03	.1449	3.990E-03	.1633	3.096E-03	.1267	.0050		0
4	195.8	14.094	1.301E-02	.5324	1.475E-02	.6036	1.302E-02	.5328	.0120		0
2	149.9	5.780	8.818E-03	.3608	9.967E-03	.4078	9.131E-03	.3736	.0200		0
3	154.6	6.965	6.195E-03	.2535	6.990E-03	.2860	6.612E-03	.2705	.0400		0
6	144.5	5.101	4.496E-03	.1840	5.068E-03	.2073	4.864E-03	.1990	.0600		0
7	138.5	4.405	3.863E-03	.1581	4.351E-03	.1780	4.220E-03	.1727	.0800		0
8	136.3	4.019	3.517E-03	.1439	3.960E-03	.1620	3.866E-03	.1582	.1000		0
10	131.1	3.476	3.028E-03	.1239	3.408E-03	.1394	3.353E-03	.1372	.1500	0	0
12	145.0	4.388	3.870E-03	.1583	4.362E-03	.1785	4.291E-03	.1756	.1500	30.0000	
13	144.4	3.212	2.831E-03	.1158	3.191E-03	.1306	3.139E-03	.1284	.1500	45.5000	
17	143.8	3.663	3.226E-03	.1320	3.636E-03	.1488	3.592E-03	.1470	.2000		.1070
19	128.3	2.675	2.325E-03	.0951	2.615E-03	.1070	2.582E-03	.1056	.2250		0
20	125.7	2.807	2.434E-03	.0996	2.737E-03	.1120	2.711E-03	.1109	.2500		0
22	131.6	2.794	2.435E-03	.0996	2.741E-03	.1121	2.717E-03	.1112	.2750		0
24	145.1	3.052	2.691E-03	.1101	3.033E-03	.1241	3.006E-03	.1230	.3000	34.0000	
25	153.9	3.230	2.871E-03	.1175	3.240E-03	.1326	3.210E-03	.1314	.3000	40.0000	
26	162.4	3.220	2.883E-03	.1180	3.256E-03	.1332	3.227E-03	.1320	.3000	45.0000	
29	150.9	2.202	1.952E-03	.0799	2.201E-03	.0901	2.181E-03	.0892	.3250		0
30	151.0	2.190	1.942E-03	.0794	2.190E-03	.0896	2.170E-03	.0888	.3500		0
31	144.7	2.457	2.166E-03	.0886	2.442E-03	.0999	2.420E-03	.0990	.4000		0
32	150.6	2.317	2.053E-03	.0840	2.316E-03	.0948	2.295E-03	.0939	.4000		.1070
33	146.5	2.224	1.964E-03	.0804	2.214E-03	.0906	2.194E-03	.0898	.4500		0
34	136.3	2.412	2.111E-03	.0864	2.377E-03	.0972	2.356E-03	.0964	.5000		0
35	147.9	2.114	1.869E-03	.0765	2.108E-03	.0862	2.089E-03	.0855	.5000		.1070
37	141.5	2.269	1.994E-03	.0816	2.247E-03	.0919	2.227E-03	.0911	.5500		0
38	141.4	2.248	1.976E-03	.0809	2.227E-03	.0911	2.207E-03	.0903	.6000		0
39	152.4	1.985	1.762E-03	.0721	1.988E-03	.0813	1.970E-03	.0806	.6000		.1070
40	145.3	2.225	1.962E-03	.0803	2.212E-03	.0905	2.192E-03	.0897	.6500		0
41	144.0	2.037	1.795E-03	.0734	2.022E-03	.0828	2.004E-03	.0820	.7000		0
43	151.3	1.823	1.617E-03	.0662	1.824E-03	.0746	1.807E-03	.0739	.7500		0
44	147.7	1.862	1.646E-03	.0674	1.856E-03	.0759	1.839E-03	.0753	.8000		0
45	161.4	1.887	1.688E-03	.0691	1.906E-03	.0780	1.889E-03	.0773	.8000		.1070
46	148.9	1.682	1.488E-03	.0609	1.678E-03	.0687	1.672E-03	.0684	.8500		0
47	143.5	1.609	1.417E-03	.0580	1.597E-03	.0654	1.598E-03	.0654	.9000		0
48	143.5	2.209	1.945E-03	.0796	2.192E-03	.0897	2.193E-03	.0897	.9000		.1070
49	146.9	1.275	1.126E-03	.0461	1.270E-03	.0520	1.276E-03	.0522	.9500		0
50	140.6	1.218	1.070E-03	.0438	1.205E-03	.0493	1.214E-03	.0497	1.0000		0
51	159.4	1.458	1.302E-03	.0533	1.470E-03	.0601	1.481E-03	.0606	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
52	1		7.94	209.7	1279	30.09	.09	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FH (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.0	.023	.995	3772	2.013E-05	7.569E-08	1.003E 06	2.444E-02	4.056E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	174.1	3.085	2.792E-03	.1142	3.158E-03	.1292	3.081E-03	.1261	.0820	.2500
53	170.5	2.473	2.231E-03	.0913	2.522E-03	.1032	2.486E-03	.1017	.3020	.2500
54	161.0	2.073	1.854E-03	.0759	2.093E-03	.0857	2.063E-03	.0844	.4470	.2500
55	150.1	1.805	1.599E-03	.0654	1.804E-03	.0738	1.780E-03	.0728	.5910	.2500
56	143.2	1.949	1.747E-03	.0715	1.973E-03	.0807	1.961E-03	.0803	.7360	.2500
57	154.8	1.710	1.521E-03	.0622	1.716E-03	.0702	1.710E-03	.0700	.8810	.2500
58	164.6	5.618	5.041E-03	.2063	5.695E-03	.2330	5.476E-03	.2241	.0500	.4000
59	155.7	4.611	4.105E-03	.1680	4.633E-03	.1896	4.501E-03	.1842	.1000	.4000
60	143.8	3.572	3.146E-03	.1287	3.546E-03	.1451	3.459E-03	.1415	.2000	.4000
61	135.2	2.901	2.536E-03	.1038	2.856E-03	.1168	2.796E-03	.1144	.3000	.4000
62	144.4	2.462	2.170E-03	.0888	2.445E-03	.1001	2.409E-03	.0986	.5600	.4000
63	138.4	2.813	2.466E-03	.1009	2.777E-03	.1136	2.749E-03	.1125	.7000	.4000
64	130.1	1.901	1.654E-03	.0677	1.862E-03	.0762	1.877E-03	.0768	.9000	.4000
65	148.3	5.176	4.578E-03	.1873	5.162E-03	.2112	5.055E-03	.2068	.1760	.5000
66	141.9	3.402	2.992E-03	.1224	3.371E-03	.1379	3.296E-03	.1349	.4840	.5000
82	135.8	2.894	2.523E-03	.1032	2.841E-03	.1162	2.808E-03	.1149	.7000	.5000
67	128.7	2.389	2.077E-03	.0850	2.336E-03	.0956	2.358E-03	.0965	.9000	.5000
68	149.7	5.989	5.303E-03	.2170	5.981E-03	.2447	5.844E-03	.2393	.1000	.6000
69	146.8	4.966	4.384E-03	.1795	4.945E-03	.2023	4.838E-03	.1980	.2000	.6000
70	139.8	4.031	3.538E-03	.1448	3.986E-03	.1631	3.892E-03	.1592	.4300	.6000
71	133.4	2.889	2.521E-03	.1032	2.838E-03	.1161	2.790E-03	.1142	.6000	.6000
72	127.2	2.342	2.033E-03	.0832	2.287E-03	.0936	2.285E-03	.0935	.8000	.6000
73	130.0	2.113	1.839E-03	.0752	2.069E-03	.0847	2.088E-03	.0854	.9000	.6000
74	152.3	7.355	6.529E-03	.2671	7.364E-03	.3013	7.191E-03	.2942	.1000	.7500
75	142.2	4.091	3.598E-03	.1472	4.055E-03	.1659	3.961E-03	.1621	.3000	.7500
76	135.0	3.601	3.148E-03	.1288	3.544E-03	.1450	3.469E-03	.1420	.5000	.7500
77	128.8	3.514	3.055E-03	.1250	3.437E-03	.1406	3.401E-03	.1392	.7000	.7500
78	125.7	2.562	2.213E-03	.0905	2.489E-03	.1018	2.509E-03	.1027	.9000	.7500
79	156.5	8.310	7.403E-03	.3029	8.355E-03	.3419	8.149E-03	.3334	.1000	.8500
80	143.1	5.631	4.958E-03	.2028	5.587E-03	.2286	5.456E-03	.2232	.3000	.8500
81	139.4	4.892	4.293E-03	.1757	4.836E-03	.1979	4.735E-03	.1937	.5000	.8500
83	154.6	6.760	6.012E-03	.2460	6.784E-03	.2776	6.612E-03	.2706	.1000	.9500
84	136.9	3.979	3.484E-03	.1425	3.923E-03	.1605	3.844E-03	.1573	.5000	.9500
85	140.5	5.508	4.838E-03	.1979	5.450E-03	.2230	5.487E-03	.2245	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
53	1		7.94	210.2	1282	35.11	5.11	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.2	.023	.998	3776	2.013E-05	7.586E-08	1.002E 06	2.447E-02	4.058E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	146.7	4.261	3.753E-03	.1534	4.231E-03	.1729	3.182E-03	.1300	.0050		0
4	285.8	13.930	1.294E-02	.5289	1.469E-02	.6005	1.261E-02	.5154	.0120		0
2	178.9	10.110	9.165E-03	.3745	1.037E-02	.4238	9.265E-03	.3786	.0200		0
3	160.0	7.849	6.995E-03	.2859	7.898E-03	.3228	7.307E-03	.2986	.0400		0
6	148.7	5.897	5.203E-03	.2126	5.867E-03	.2398	5.516E-03	.2254	.0600		0
7	143.0	5.105	4.482E-03	.1832	5.051E-03	.2064	4.805E-03	.1963	.0800		0
8	140.4	4.700	4.117E-03	.1683	4.638E-03	.1896	4.444E-03	.1816	.1000		0
10	137.4	3.720	3.250E-03	.1328	3.660E-03	.1496	3.537E-03	.1446	.1500	0	0
12	151.3	4.808	4.252E-03	.1738	4.796E-03	.1960	4.633E-03	.1893	.1500	30.0000	
13	148.8	3.268	2.883E-03	.1178	3.251E-03	.1329	3.141E-03	.1284	.1500	45.5000	
17	151.4	3.647	3.226E-03	.1318	3.638E-03	.1487	3.531E-03	.1443	.2000		.1070
19	132.6	3.214	2.797E-03	.1143	3.148E-03	.1286	3.054E-03	.1248	.2250		0
20	131.5	3.158	2.745E-03	.1122	3.089E-03	.1262	3.008E-03	.1229	.2500		0
22	137.6	3.152	2.754E-03	.1125	3.101E-03	.1267	3.022E-03	.1235	.2750		0
24	150.4	3.422	3.024E-03	.1236	3.411E-03	.1394	3.322E-03	.1358	.3000	34.0000	
25	159.2	3.582	3.190E-03	.1304	3.601E-03	.1472	3.507E-03	.1433	.3000	40.0000	
26	168.1	3.436	3.085E-03	.1261	3.486E-03	.1425	3.394E-03	.1387	.3000	45.0000	
29	154.0	2.737	2.426E-03	.0992	2.738E-03	.1119	2.666E-03	.1090	.3250		
30	154.1	2.702	2.396E-03	.0979	2.703E-03	.1105	2.633E-03	.1076	.3500		0
31	149.5	2.643	2.334E-03	.0954	2.632E-03	.1076	2.564E-03	.1048	.4000		0
32	152.1	2.686	2.377E-03	.0971	2.681E-03	.1096	2.611E-03	.1067	.4000		0
33	149.4	2.524	2.229E-03	.0911	2.513E-03	.1027	2.448E-03	.1000	.4500		.1070
34	142.7	2.685	2.357E-03	.0963	2.655E-03	.1085	2.587E-03	.1057	.5000		0
35	149.0	2.385	2.105E-03	.0860	2.374E-03	.0970	2.312E-03	.0945	.5000		0
37	150.6	2.352	2.079E-03	.0850	2.344E-03	.0958	2.284E-03	.0933	.5500		.1070
38	150.4	2.404	2.124E-03	.0868	2.396E-03	.0979	2.334E-03	.0954	.6000		0
39	156.3	2.281	2.026E-03	.0828	2.287E-03	.0935	2.227E-03	.0910	.6000		0
40	152.0	2.332	2.064E-03	.0843	2.328E-03	.0951	2.268E-03	.0927	.6500		.1070
41	150.1	2.313	2.043E-03	.0835	2.304E-03	.0942	2.244E-03	.0917	.7000		0
43	158.3	2.190	1.949E-03	.0796	2.200E-03	.0899	2.142E-03	.0875	.7500		0
44	153.6	2.036	1.804E-03	.0737	2.035E-03	.0832	1.982E-03	.0810	.8000		0
45	165.6	2.032	1.820E-03	.0744	2.056E-03	.0840	2.002E-03	.0818	.8000		.1070
46	155.0	.986	8.745E-04	.0357	9.867E-04	.0403	9.665E-04	.0395	.8500		0
47	143.9	2.024	1.778E-03	.0727	2.004E-03	.0819	1.973E-03	.0806	.9000		0
48	146.1	2.369	2.086E-03	.0852	2.351E-03	.0961	2.314E-03	.0946	.9000		.1070
49	146.0	1.493	1.314E-03	.0537	1.481E-03	.0605	1.465E-03	.0599	.9500		0
50	142.0	1.368	1.200E-03	.0490	1.352E-03	.0552	1.342E-03	.0548	1.0000		0
51	160.1	1.593	1.420E-03	.0580	1.603E-03	.0655	1.591E-03	.0650	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
53	1		7.94	210.2	1282	35.11	5.11	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT).	STFR (R= .0175FT)	SWITCH POSITION
94.2	.023	.998	3776	2.013E-05	7.586E-08	1.002E 06	2.447E-02	4.058E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	173.4	3.338	3.011E-03	.1231	3.405E-03	.1392	3.260E-03	.1332	.0820	.2500
53	165.8	2.802	2.510E-03	.1026	2.836E-03	.1159	2.746E-03	.1122	.3020	.2500
54	163.5	2.245	2.007E-03	.0820	2.267E-03	.0927	2.194E-03	.0897	.4470	.2500
55	154.3	2.132	1.890E-03	.0772	2.133E-03	.0872	2.068E-03	.0845	.5910	.2500
56	154.0	2.220	1.986E-03	.0811	2.243E-03	.0917	2.192E-03	.0896	.7360	.2500
57	154.3	2.095	1.858E-03	.0759	2.096E-03	.0857	2.054E-03	.0839	.8810	.2500
58	169.6	5.352	4.811E-03	.1966	5.438E-03	.2222	5.122E-03	.2093	.0500	.4000
59	162.4	4.487	4.007E-03	.1638	4.526E-03	.1849	4.311E-03	.1762	.1000	.4000
60	151.1	3.639	3.217E-03	.1315	3.629E-03	.1483	3.473E-03	.1419	.2000	.4000
61	141.3	3.189	2.796E-03	.1143	3.150E-03	.1287	3.028E-03	.1237	.3000	.4000
62	141.7	2.709	2.376E-03	.0971	2.677E-03	.1094	2.591E-03	.1059	.5000	.4000
63	141.5	2.512	2.203E-03	.0900	2.482E-03	.1014	2.414E-03	.0987	.7000	.4000
64	126.2	2.384	2.063E-03	.0843	2.320E-03	.0948	2.305E-03	.0942	.9000	.4000
65	158.3	4.563	4.061E-03	.1660	4.584E-03	.1873	4.405E-03	.1800	.1760	.5000
66	137.9	3.721	3.252E-03	.1329	3.663E-03	.1497	3.516E-03	.1437	.4840	.5000
82	136.5	2.933	2.560E-03	.1046	2.883E-03	.1178	2.801E-03	.1145	.7000	.5000
67	126.5	2.656	2.299E-03	.0939	2.586E-03	.1057	2.573E-03	.1051	.9000	.5000
68	162.5	6.162	5.504E-03	.2249	6.216E-03	.2540	5.962E-03	.2437	.1000	.6000
69	151.8	5.398	4.776E-03	.1952	5.387E-03	.2202	5.173E-03	.2114	.2000	.6000
70	140.7	4.429	3.881E-03	.1586	4.372E-03	.1787	4.190E-03	.1712	.4300	.6000
71	133.6	3.622	3.154E-03	.1289	3.550E-03	.1451	3.428E-03	.1401	.6000	.6000
72	132.5	2.682	2.333E-03	.0953	2.626E-03	.1073	2.581E-03	.1055	.8000	.6000
73	130.9	2.909	2.528E-03	.1033	2.844E-03	.1162	2.829E-03	.1156	.9000	.6000
74	165.4	7.606	6.812E-03	.2784	7.695E-03	.3145	7.370E-03	.3012	.1000	.7500
75	143.8	4.481	3.937E-03	.1609	4.437E-03	.1813	4.254E-03	.1738	.3000	.7500
76	138.8	3.755	3.284E-03	.1342	3.699E-03	.1512	3.555E-03	.1453	.5000	.7500
77	134.5	3.350	2.919E-03	.1193	3.286E-03	.1343	3.196E-03	.1306	.7000	.7500
78	128.6	2.898	2.513E-03	.1027	2.827E-03	.1155	2.809E-03	.1148	.9000	.7500
79	165.5	7.473	6.693E-03	.2735	7.561E-03	.3090	7.233E-03	.2956	.1000	.8500
80	148.8	5.145	4.540E-03	.1856	5.120E-03	.2092	4.906E-03	.2005	.3000	.8500
81	140.5	4.475	3.920E-03	.1602	4.416E-03	.1805	4.245E-03	.1735	.5000	.8500
83	155.5	5.928	5.262E-03	.2151	5.938E-03	.2427	5.678E-03	.2321	.1000	.9500
84	146.3	5.692	5.012E-03	.2048	5.650E-03	.2309	5.434E-03	.2221	.5000	.9500
85	137.8	3.738	3.267E-03	.1335	3.679E-03	.1504	3.650E-03	.1491	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
54	1		7.94	210.5	1283	25.13	-4.87	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94.3	.023	.999	3778	2.015E-05	7.590E-08	1.003F 06	2.449E-02	4.055E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	135.5	3.369	2.936E-03	.1199	3.306E-03	.1350	2.644E-03	.1079	.0050		0
4	197.7	13.330	1.217E-02	.4969	1.378E-02	.5629	1.249E-02	.5098	.0120		0
2	141.5	9.235	8.234E-03	.3362	9.298E-03	.3797	8.716E-03	.3559	.0200		0
3	146.0	6.591	5.797E-03	.2367	6.534E-03	.2668	6.306E-03	.2575	.0400		0
6	137.9	4.687	4.093E-03	.1671	4.610E-03	.1882	4.507E-03	.1841	.0600		0
7	133.1	3.884	3.377E-03	.1379	3.802E-03	.1552	3.752E-03	.1532	.0800		0
8	128.8	3.521	3.050E-03	.1246	3.432E-03	.1401	3.406F-03	.1391	.1000		0
10	125.1	2.730	2.358E-03	.0963	2.652E-03	.1083	2.650E-03	.1082	.1500	0	0
12	140.3	3.836	3.357E-03	.1371	3.782E-03	.1544	3.779E-03	.1543	.1500	30.0000	
13	144.0	2.999	2.633E-03	.1075	2.968E-03	.1212	2.966E-03	.1211	.1500	45.5000	
17	140.0	3.046	2.665E-03	.1088	3.001E-03	.1226	3.011E-03	.1229	.2000		.1070
19	126.8	1.933	1.672E-03	.0683	1.881E-03	.0768	1.885E-03	.0770	.2250		0
20	125.9	2.044	1.767E-03	.0721	1.987E-03	.0811	1.997E-03	.0815	.2500		0
22	132.2	2.088	1.814E-03	.0741	2.042E-03	.0834	2.054E-03	.0839	.2750		0
24	137.3	2.809	2.452E-03	.1001	2.761E-03	.1127	2.777E-03	.1134	.3000	34.0000	
25	145.0	2.846	2.501E-03	.1021	2.818E-03	.1151	2.835E-03	.1158	.3000	40.0000	
26	155.4	3.018	2.677E-03	.1093	3.021E-03	.1233	3.039E-03	.1241	.3000	45.0000	
29	144.8	1.837	1.614E-03	.0659	1.819E-03	.0743	1.830E-03	.0747	.3250		0
30	143.0	1.894	1.661E-03	.0678	1.872E-03	.0764	1.883E-03	.0769	.3500		0
31	141.4	1.787	1.566E-03	.0639	1.764E-03	.0720	1.774E-03	.0725	.4000		0
32	143.9	1.843	1.618E-03	.0660	1.823E-03	.0744	1.834F-03	.0749	.4000		.1070
33	142.9	1.752	1.537E-03	.0627	1.732E-03	.0707	1.742E-03	.0711	.4500		0
34	137.5	1.801	1.572E-03	.0642	1.770E-03	.0723	1.781E-03	.0727	.5000		0
35	143.7	1.723	1.512E-03	.0618	1.704E-03	.0696	1.714E-03	.0700	.5000		.1070
37	142.3	1.684	1.476E-03	.0603	1.663E-03	.0679	1.673F-03	.0683	.5500		0
38	139.0	1.760	1.539E-03	.0628	1.733E-03	.0708	1.743E-03	.0712	.6000		0
39	146.2	1.659	1.459E-03	.0596	1.645E-03	.0672	1.655E-03	.0676	.6000		.1070
40	144.0	1.730	1.519E-03	.0620	1.712E-03	.0699	1.722E-03	.0703	.6500		0
41	140.0	1.651	1.444E-03	.0590	1.627E-03	.0664	1.637E-03	.0668	.7000		0
43	146.3	1.584	1.393E-03	.0569	1.571E-03	.0641	1.580E-03	.0645	.7500		0
44	143.7	1.536	1.348E-03	.0551	1.520E-03	.0620	1.528E-03	.0624	.8000		0
45	152.2	1.733	1.532E-03	.0626	1.728E-03	.0706	1.739F-03	.0710	.8000		.1070
46	145.0	1.395	1.226E-03	.0501	1.382E-03	.0564	1.396E-03	.0570	.8500		0
47	145.5	-92.916	-8.168E-02	-3.3354	-9.207E-02	-3.7595	-9.336E-02	-3.8120	.9000		0
48	154.6	-7.806	-6.918E-03	-.2825	-7.806E-03	-.3187	-7.916E-03	-.3232	.9000		.1070
49	146.7	1.036	9.114E-04	.0372	1.027E-03	.0420	1.046E-03	.0427	.9500		0
50	139.8	.922	8.065E-04	.0329	9.085E-04	.0371	9.267E-04	.0378	1.0000		0
51	156.8	1.154	1.025E-03	.0419	1.157E-03	.0472	1.180F-03	.0482	1.0000		.2140

AEDC(AHO•INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
54	1		7.94	210•5	1283	25•13	-4•87	30•00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
94•3	•023	•999	7778	2•015E-05	7•590E-08	1•003E 06	2•449E-02	4•055E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(•9TO)	H(•9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	159.7	3.007	2.677E-03	•1093	3•022E-03	•1234	3•001E-03	•1225	•0820	•2500
53	158.9	2.191	1.950E-03	•0796	2•201E-03	•0899	2•204E-03	•0900	•3020	•2500
54	155.0	1.778	1.577E-03	•0644	1•779E-03	•0726	1•781E-03	•0727	•4470	•2500
55	146.6	1.578	1.389E-03	•0567	1•566E-03	•0639	1•569E-03	•0641	•5910	•2500
56	156.5	1.594	1.415E-03	•0578	1•597E-03	•0652	1•611E-03	•0658	•7360	•2500
57	155.1	1.387	1.230E-03	•0502	1•388E-03	•0567	1•403E-03	•0573	•8810	•2500
58	163.2	5.895	5.265E-03	•2150	5•946E-03	•2428	5•825E-03	•2379	•0500	•4000
59	154.8	4.473	3.965E-03	•1619	4•473E-03	•1827	4•422E-03	•1806	•1000	•4000
60	144.6	3.282	2.883E-03	•1177	3•249E-03	•1327	3•223E-03	•1316	•2000	•4000
61	136.8	2.483	2.167E-03	•0885	2•440E-03	•0996	2•428E-03	•0991	•3000	•4000
62	136.3	2.444	2.132E-03	•0870	2•400E-03	•0980	2•402E-03	•0981	•5600	•4000
63	135.9	2.329	2.030E-03	•0829	2•286E-03	•0933	2•297E-03	•0938	•7000	•4000
64	129.0	1.424	1.234E-03	•0504	1•388E-03	•0567	1•416E-03	•0578	•9000	•4000
65	153.2	4.394	3.869E-03	•1588	4•387E-03	•1791	4•367E-03	•1783	•1760	•5000
66	140.6	3.070	2.687E-03	•1097	3•027E-03	•1236	3•009E-03	•1229	•4840	•5000
82	140.3	2.781	2.434E-03	•0994	2•742E-03	•1120	2•752E-03	•1124	•7000	•5000
67	127.9	2.041	1.767E-03	•0721	1•988E-03	•0812	2•031E-03	•0829	•9000	•5000
68	145.7	4.253	3.740E-03	•1527	4•215E-03	•1721	4•191E-03	•1711	•1000	•6000
69	141.6	3.152	2.762E-03	•1128	3•111E-03	•1270	3•095E-03	•1264	•2000	•6000
70	138.9	2.467	2.156E-03	•0881	2•429E-03	•0992	2•411E-03	•0985	•4300	•6000
71	134.3	2.768	2.410E-03	•0984	2•713E-03	•1108	2•709E-03	•1106	•6000	•6000
72	133.9	1.981	1.724E-03	•0704	1•941E-03	•0792	1•965E-03	•0802	•8000	•6000
73	132.2	1.817	1.579E-03	•0645	1•777E-03	•0726	1•815E-03	•0741	•9000	•6000
74	154.6	6.106	5.411E-03	•2210	6•105E-03	•2493	6•063E-03	•2476	•1000	•7500
75	144.3	3.163	2.778E-03	•1134	3•130E-03	•1278	3•109E-03	•1270	•3000	•7500
76	136.9	3.127	2.728E-03	•1114	3•072E-03	•1254	3•057E-03	•1248	•5000	•7500
77	132.6	2.710	2.356E-03	•0962	2•651E-03	•1083	2•663E-03	•1087	•7000	•7500
78	129.6	2.329	2.019E-03	•0825	2•272E-03	•0928	2•318E-03	•0947	•9000	•7500
79	160.2	7.306	6.507E-03	•2657	7•347E-03	•3000	7•288E-03	•2976	•1000	•8500
80	138.6	4.069	3.556E-03	•1452	4•005E-03	•1635	3•977E-03	•1624	•3000	•8500
81	132.3	3.748	3.257E-03	•1330	3•665E-03	•1497	3•648E-03	•1490	•5000	•8500
83	159.1	7.494	6.667E-03	•2722	7•526E-03	•3073	7•462E-03	•3047	•1000	•9500
84	131.7	3.684	3.200E-03	•1307	3•602E-03	•1471	3•587E-03	•1465	•5000	•9500
85	128.5	2.842	2.462E-03	•1005	2•769E-03	•1131	2•823E-03	•1153	•9000	•9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-218A

GROUP	CONFIG	MODEL	MACH NO	Po,PSIA	To,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
55	1		7.99	545.6	1321	30.14	.14	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	U-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.9	.056	2.518	3835	4.928E-05	7.724E-08	2.446E 06	3.908E-02	2.601E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	143.6	6.071	5.245E-03	.1342	5.921E-03	.1515	4.575E-03	.1171	.0050		0
4	240.6	20.022	1.853E-02	.4742	2.111E-02	.5403	1.854E-02	.4745	.0120		0
2	206.8	14.815	1.330E-02	.3402	1.508E-02	.3860	1.378E-02	.3526	.0200		
3	182.3	10.520	9.238E-03	.2364	1.045E-02	.2674	9.871E-03	.2526	.0400		0
6	167.8	8.078	7.005E-03	.1792	7.911E-03	.2024	7.586E-03	.1941	.0600		0
7	160.2	6.886	5.932E-03	.1518	6.694E-03	.1713	6.489E-03	.1660	.0800		0
8	157.6	6.311	5.425E-03	.1388	6.120E-03	.1566	5.971E-03	.1528	.1000		0
10	148.9	5.019	4.282E-03	.1096	4.826E-03	.1235	4.747E-03	.1215	.1500		0
12	149.4	6.652	5.776E-03	.1478	6.524E-03	.1669	6.415E-03	.1641	.1500	0	0
13	147.7	4.765	4.132E-03	.1057	4.666E-03	.1194	4.588E-03	.1174	.1500	30.0000	
17	144.8	5.045	4.363E-03	.1116	4.926E-03	.1261	4.864E-03	.1245	.1500	45.5000	
19	146.2	3.943	3.357E-03	.0859	3.782E-03	.0968	3.732E-03	.0955	.2000		
20	146.4	3.823	3.255E-03	.0833	3.667E-03	.0938	3.631E-03	.0929	.2250		.1070
22	153.0	3.989	3.415E-03	.0874	3.851E-03	.0985	3.815E-03	.0976	.2500		0
24	162.6	4.752	4.102E-03	.1050	4.630E-03	.1185	4.587E-03	.1174	.2750		0
25	169.1	4.943	4.291E-03	.1098	4.847E-03	.1240	4.802E-03	.1229	.3000		0
26	178.7	4.983	4.362E-03	.1116	4.932E-03	.1262	4.886E-03	.1250	.3000	34.0000	
29	169.7	3.293	2.860E-03	.0732	3.230E-03	.0827	3.200E-03	.0819	.3250	40.0000	
30	169.3	2.638	2.291E-03	.0586	2.587E-03	.0662	2.563E-03	.0656	.3500	45.0000	
31	163.9	3.483	3.010E-03	.0770	3.398E-03	.0869	3.366E-03	.0861	.4000		0
32	163.3	3.616	3.123E-03	.0799	3.525E-03	.0902	3.493E-03	.0894	.4000		0
33	157.7	3.801	3.267E-03	.0836	3.686E-03	.0943	3.652E-03	.0934	.4500		0
34	150.1	3.826	3.267E-03	.0836	3.683E-03	.0942	3.649E-03	.0934	.5000		.1070
35	158.3	3.317	2.853E-03	.0730	3.218E-03	.0824	3.189E-03	.0816	.5000		0
37	154.0	3.427	2.936E-03	.0751	3.311E-03	.0847	3.281E-03	.0839	.5500		0
38	155.3	3.383	2.902E-03	.0743	3.273E-03	.0837	3.242E-03	.0830	.6000		.1070
39	151.6	3.188	2.750E-03	.0704	3.103E-03	.0794	3.074E-03	.0787	.6000		0
40	160.0	3.401	2.929E-03	.0750	3.305E-03	.0846	3.275E-03	.0838	.6500		0
41	159.9	3.450	2.971E-03	.0760	3.353E-03	.0858	3.322E-03	.0850	.7000		.1070
43	166.1	3.413	2.955E-03	.0756	3.337E-03	.0854	3.306E-03	.0846	.7500		0
44	166.1	3.770	3.265E-03	.0835	3.686E-03	.0943	3.652E-03	.0934	.8000		0
45	177.3	3.495	3.056E-03	.0782	3.455E-03	.0884	3.423E-03	.0876	.8000		0
46	171.9	3.895	3.390E-03	.0867	3.830E-03	.0980	3.814E-03	.0976	.8500		.1070
47	167.7	4.186	3.629E-03	.0929	4.099E-03	.1049	4.099E-03	.1049	.9000		0
48	163.1	4.648	4.014E-03	.1027	4.531E-03	.1159	4.532E-03	.1160	.9000		0
49	169.5	4.226	3.670E-03	.0939	4.146E-03	.1061	4.165E-03	.1066	.9500		.1070
50	165.4	4.727	4.090E-03	.1047	4.618E-03	.1182	4.652E-03	.1190	1.0000		0
51	177.9	4.184	3.660E-03	.0937	4.138E-03	.1059	4.169E-03	.1067	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
55	1		7.99	545.6	1321	30.14	.14	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.9	.056	2.518	.935	4.928E-05	7.724E-08	2.446E 06	3.908E-02	2.601E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	192.2	4.817	4.230E-03	.1082	4.785E-03	.1224	4.669E-03	.1195	.0820	.2500
53	179.1	3.940	3.451E-03	.0883	3.902E-03	.0999	3.846E-03	.0984	.3020	.2500
54	169.5	3.289	2.856E-03	.0731	3.226E-03	.0826	3.179E-03	.0813	.4470	.2500
55	165.1	2.997	2.593E-03	.0664	2.928E-03	.0749	2.889E-03	.0739	.5910	.2500
56	182.0	3.587	3.149E-03	.0806	3.562E-03	.0912	3.540E-03	.0906	.7360	.2500
57	176.2	3.829	3.345E-03	.0856	3.781E-03	.0968	3.767E-03	.0964	.8810	.2500
58	189.5	8.351	7.380E-03	.1888	8.356E-03	.2138	8.028E-03	.2054	.0500	.4000
59	177.5	7.056	6.171E-03	.1579	6.977E-03	.1785	6.774E-03	.1733	.1000	.4000
60	166.8	5.384	4.664E-03	.1194	5.267E-03	.1348	5.135E-03	.1314	.2000	.4000
61	150.2	4.218	3.602E-03	.0922	4.061E-03	.1039	3.974E-03	.1017	.3000	.4000
62	168.6	4.295	3.727E-03	.0954	4.210E-03	.1077	4.145E-03	.1061	.5600	.4000
63	166.2	4.177	3.617E-03	.0925	4.084E-03	.1045	4.040E-03	.1034	.7000	.4000
64	153.1	3.577	3.062E-03	.0784	3.453E-03	.0884	3.480E-03	.0891	.9000	.4000
65	177.6	7.605	6.651E-03	.1702	7.520E-03	.1924	7.359E-03	.1883	.1760	.5000
66	169.4	5.732	4.977E-03	.1274	5.622E-03	.1439	5.494E-03	.1406	.4840	.5000
82	165.6	4.514	3.907E-03	.1000	4.411E-03	.1129	4.358E-03	.1115	.7000	.5000
67	153.6	3.967	3.398E-03	.0870	3.832E-03	.0981	3.868E-03	.0990	.9000	.5000
68	182.0	9.464	8.309E-03	.2126	9.399E-03	.2405	9.183E-03	.2350	.1000	.6000
69	181.9	7.308	6.416E-03	.1642	7.257E-03	.1857	7.094E-03	.1815	.2000	.6000
70	170.0	6.644	5.772E-03	.1477	6.521E-03	.1669	6.362E-03	.1628	.4300	.6000
71	158.5	4.680	4.026E-03	.1030	4.542E-03	.1162	4.462E-03	.1142	.6000	.6000
72	151.8	3.408	2.915E-03	.0746	3.286E-03	.0841	3.282E-03	.0840	.8000	.6000
73	155.3	3.386	2.905E-03	.0743	3.276E-03	.0838	3.306E-03	.0846	.9000	.6000
74	214.1	16.457	1.487E-02	.3804	1.688E-02	.4320	1.646E-02	.4212	.1000	.7500
75	171.1	6.488	5.643E-03	.1444	6.375E-03	.1631	6.224E-03	.1593	.3000	.7500
76	166.2	5.238	4.536E-03	.1161	5.122E-03	.1311	5.011E-03	.1282	.5000	.7500
77	158.7	4.533	3.900E-03	.0998	4.400E-03	.1126	4.353E-03	.1114	.7000	.7500
78	157.1	3.724	3.200E-03	.0819	3.610E-03	.0924	3.639E-03	.0931	.9000	.7500
79	200.9	11.845	1.057E-02	.2706	1.199E-02	.3068	1.168E-02	.2989	.1000	.8500
80	214.6	16.739	1.513E-02	.3871	1.718E-02	.4396	1.675E-02	.4286	.3000	.8500
81	204.3	16.794	1.504E-02	.3848	1.706E-02	.4364	1.668E-02	.4268	.5000	.8500
83	185.9	10.033	8.839E-03	.2262	1.000E-02	.2560	9.742E-03	.2493	.1000	.9500
84	185.4	11.488	1.012E-02	.2589	1.145E-02	.2929	1.121E-02	.2868	.5000	.9500
85	187.4	11.616	1.025E-02	.2622	1.160E-02	.2968	1.168E-02	.2988	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
56	1		7.99	544.9	1318	35.19	5.19	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.7	.056	2.51[illegible]	3830	4.933E-05	7.705E-08	2.452E 06	3.904E-02	2.599E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	193.7	5.763	5.126E-03	.1313	5.807E-03	.1487	4.319E-03	.1106	.0050		0
4	241.5	19.570	1.852E-02	.4745	2.116E-02	.5421	1.802E-02	.4615	.0120		0
2	229.7	14.469	1.329E-02	.3405	1.513E-02	.3875	1.344E-02	.3443	.0200		0
3	201.8	10.795	9.671E-03	.2477	1.097E-02	.2809	1.011E-02	.2591	.0400		0
6	182.2	8.994	7.919E-03	.2028	8.958E-03	.2295	8.405E-03	.2153	.0600		0
7	173.6	7.763	6.783E-03	.1738	7.666E-03	.1964	7.281E-03	.1865	.0800		0
8	172.3	7.305	6.376E-03	.1633	7.205E-03	.1846	6.892E-03	.1765	.1000		0
10	172.5	5.343	4.664E-03	.1195	5.270E-03	.1350	5.087E-03	.1303	.1500	0	0
12	204.3	6.371	5.721E-03	.1465	6.488E-03	.1662	6.255E-03	.1602	.1500	30.0000	
13	203.3	4.181	3.751E-03	.0961	4.254E-03	.1090	4.101E-03	.1051	.1500	45.5000	
17	195.7	5.055	4.505E-03	.1154	5.104E-03	.1307	4.946E-03	.1267	.2000		.1070
19	156.5	4.932	4.246E-03	.1088	4.790E-03	.1227	4.642E-03	.1189	.2250		0
20	156.7	4.854	4.180E-03	.1071	4.715E-03	.1208	4.587E-03	.1175	.2500		0
22	163.0	4.793	4.150E-03	.1063	4.685E-03	.1200	4.561E-03	.1168	.2750		0
24	184.0	4.978	4.390E-03	.1125	4.967E-03	.1272	4.834E-03	.1238	.3000	34.0000	
25	193.7	5.050	4.492E-03	.1151	5.088E-03	.1303	4.950E-03	.1268	.3000	40.0000	
26	203.2	5.036	4.518E-03	.1157	5.123E-03	.1312	4.983E-03	.1276	.3000	45.0000	
29	181.3	3.807	3.349E-03	.0858	3.789E-03	.0970	3.687E-03	.0944	.3250		
30	182.2	3.409	3.001E-03	.0769	3.396E-03	.0870	3.304E-03	.0846	.3500		0
31	175.2	3.852	3.371E-03	.0863	3.810E-03	.0976	3.708E-03	.0950	.4000		0
32	176.4	3.949	3.459E-03	.0886	3.911E-03	.1002	3.806E-03	.0975	.4000		0
33	167.9	3.953	3.437E-03	.0880	3.882E-03	.0994	3.779E-03	.0968	.4500		.1070
34	160.5	4.381	3.785E-03	.0970	4.271E-03	.1094	4.159E-03	.1065	.5000		0
35	168.7	3.669	3.192E-03	.0818	3.606E-03	.0924	3.510E-03	.0899	.5000		0
37	162.4	3.901	3.376E-03	.0865	3.811E-03	.0976	3.710E-03	.0950	.5500		.1070
38	165.2	3.969	3.443E-03	.0882	3.887E-03	.0996	3.784E-03	.0969	.6000		0
39	175.1	3.562	3.116E-03	.0798	3.523E-03	.0902	3.429E-03	.0878	.6000		0
40	171.4	3.985	3.475E-03	.0890	3.927E-03	.1006	3.822E-03	.0979	.6500		.1070
41	177.2	4.161	3.648E-03	.0934	4.124E-03	.1056	4.014E-03	.1028	.7000		0
43	181.6	3.872	3.407E-03	.0873	3.854E-03	.0987	3.750E-03	.0961	.7500		0
44	181.5	4.793	4.217E-03	.1080	4.770E-03	.1222	4.642E-03	.1189	.8000		0
45	191.8	4.585	4.071E-03	.1043	4.611E-03	.1181	4.486E-03	.1149	.8000		.1070
46	187.3	5.183	4.584E-03	.1174	5.189E-03	.1329	5.078E-03	.1301	.8500		0
47	182.5	5.723	5.040E-03	.1291	5.702E-03	.1461	5.609E-03	.1437	.9000		0
48	178.8	5.786	5.079E-03	.1301	5.744E-03	.1471	5.650E-03	.1447	.9000		.1070
49	186.1	5.799	5.123E-03	.1312	5.798E-03	.1485	5.732E-03	.1468	.9500		0
50	186.4	6.480	5.726E-03	.1467	6.481E-03	.1660	6.429E-03	.1647	1.0000		0
51	198.4	5.838	5.214E-03	.1336	5.910E-03	.1514	5.862E-03	.1501	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
56	1		7.99	544.9	1318	35.19	5.19	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.7	.056	2.515	3430	4.933E-05	7.705E-08	2.452E 06	3.904E-02	2.599E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	197.4	4.903	4.375E-03	.1121	4.958E-03	.1270	4.741E-03	.1214	.0820	.2500
53	189.3	4.137	3.665E-03	.0939	4.150E-03	.1063	4.015E-03	.1028	.3020	.2500
54	186.2	3.443	3.042E-03	.0779	3.443E-03	.0882	3.329E-03	.0853	.4470	.2500
55	184.0	3.485	3.073E-03	.0787	3.477E-03	.0891	3.368E-03	.0863	.5910	.2500
56	194.0	4.623	4.113E-03	.1054	4.660E-03	.1194	4.550E-03	.1165	.7360	.2500
57	190.0	5.225	4.632E-03	.1186	5.245E-03	.1343	5.135E-03	.1315	.8810	.2500
58	204.9	7.554	6.787E-03	.1738	7.698E-03	.1972	7.235E-03	.1853	.0500	.4000
59	197.5	6.341	5.659E-03	.1450	6.413E-03	.1643	6.098E-03	.1562	.1000	.4000
60	187.2	5.295	4.682E-03	.1199	5.300E-03	.1358	5.064E-03	.1297	.2000	.4000
61	188.6	5.006	4.355E-03	.1116	4.919E-03	.1260	4.723E-03	.1210	.3000	.4000
62	175.2	4.960	4.340E-03	.1112	4.906E-03	.1257	4.741E-03	.1214	.5600	.4000
63	177.9	4.891	4.290E-03	.1099	4.850E-03	.1242	4.713E-03	.1207	.7000	.4000
64	159.2	5.488	4.736E-03	.1213	5.344E-03	.1369	5.306E-03	.1359	.9000	.4000
65	198.3	6.644	5.934E-03	.1520	6.726E-03	.1723	6.451E-03	.1653	.1760	.5000
66	173.6	5.661	4.947E-03	.1267	5.591E-03	.1432	5.359E-03	.1373	.4840	.5000
82	173.5	4.830	4.220E-03	.1081	4.769E-03	.1222	4.627E-03	.1185	.7000	.5000
67	165.0	4.796	4.160E-03	.1066	4.697E-03	.1203	4.672E-03	.1197	.9000	.5000
68	211.1	9.325	8.424E-03	.2158	9.562E-03	.2449	9.153E-03	.2344	.1000	.6000
69	191.8	7.951	7.060E-03	.1808	7.996E-03	.2048	7.664E-03	.1963	.2000	.6000
70	174.1	7.073	6.184E-03	.1584	6.989E-03	.1790	6.688E-03	.1713	.4300	.6000
71	164.7	5.890	5.107E-03	.1308	5.766E-03	.1477	5.561E-03	.1424	.6000	.6000
72	165.9	4.327	3.756E-03	.0962	4.241E-03	.1086	4.166E-03	.1067	.8000	.6000
73	162.7	4.841	4.191E-03	.1073	4.730E-03	.1212	4.702E-03	.1204	.9000	.6000
74	211.2	10.820	9.776E-03	.2504	1.110E-02	.2843	1.061E-02	.2717	.1000	.7500
75	176.6	7.021	6.152E-03	.1576	6.955E-03	.1782	6.659E-03	.1706	.3000	.7500
76	175.6	5.566	4.872E-03	.1248	5.508E-03	.1411	5.285E-03	.1354	.5000	.7500
77	171.4	4.909	4.281E-03	.1097	4.837E-03	.1239	4.700E-03	.1204	.7000	.7500
78	163.6	4.248	3.680E-03	.0943	4.154E-03	.1064	4.126E-03	.1057	.9000	.7500
79	247.2	17.931	1.675E-02	.4289	1.910E-02	.4891	1.820E-02	.4661	.1000	.8500
80	200.3	8.500	7.604E-03	.1948	8.621E-03	.2208	8.242E-03	.2111	.3000	.8500
81	182.6	6.192	5.454E-03	.1397	6.170E-03	.1580	5.921E-03	.1517	.5000	.8500
83	221.8	13.119	1.197E-02	.3066	1.360E-02	.3485	1.297E-02	.3322	.1000	.9500
84	211.2	14.206	1.284E-02	.3288	1.457E-02	.3732	1.398E-02	.3580	.5000	.9500
85	176.3	7.881	6.903E-03	.1768	7.804E-03	.1999	7.737E-03	.1982	.9000	.9500

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
57	1		7.99	545.3	1316	25.13	-4.87	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.6	.056	2.517	3827	4.944E-05	7.694E-08	2.459E 06	3.904E-02	2.596E-02	1

GAGE	TW	CDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/L	PHI	2Y/B
1	173.8	4.544	3.978E-03	.1019	4.496E-03	.1152	3.571E-03	.0915	.0050		0
4	237.0	18.471	1.712E-02	.4385	1.950E-02	.4994	1.758E-02	.4504	.0120		0
2	203.3	13.093	1.177E-02	.3014	1.335E-02	.3419	1.248E-02	.3197	.0200		0
3	178.1	10.110	8.885E-03	.2276	1.005E-02	.2573	9.687E-03	.2481	.0400		0
6	171.7	6.437	5.625E-03	.1441	6.356E-03	.162	6.211E-03	.1591	.0600		0
7	165.9	5.297	4.606E-03	.1180	5.201E-03	.1332	5.131E-03	.1314	.0800		0
8	160.0	4.912	4.249E-03	.1088	4.795E-03	.1228	4.758E-03	.1219	.1000		0
10	148.4	4.229	3.622E-03	.0928	4.082E-03	.1046	4.080E-03	.1045	.1500	0	0
12	184.2	5.144	4.545E-03	.1164	5.143E-03	.1317	5.140E-03	.1317	.1500	30.0000	
13	190.3	3.948	3.507E-03	.0898	3.972E-03	.1017	3.969E-03	.1017	.1500	45.5000	
17	176.6	4.016	3.524E-03	.0903	3.984E-03	.1021	3.997E-03	.1024	.2000		.1070
19	150.5	2.915	2.501E-03	.0641	2.819E-03	.0722	2.826E-03	.0724	.2250		0
20	147.5	3.106	2.658E-03	.0681	2.995E-03	.0767	3.011E-03	.0771	.2500		0
22	152.8	3.001	2.580E-03	.0661	2.909E-03	.0745	2.926E-03	.0750	.2750		0
24	161.9	4.191	3.632E-03	.0930	4.099E-03	.1050	4.123E-03	.1056	.3000	34.0000	
25	170.7	4.310	3.763E-03	.0964	4.252E-03	.1089	4.277E-03	.1096	.3000	40.0000	
26	181.4	4.409	3.886E-03	.0995	4.396E-03	.1126	4.423E-03	.1133	.3000	45.0000	
29	163.8	2.565	2.226E-03	.0570	2.513E-03	.0644	2.528E-03	.0648	.3250		0
30	162.0	2.542	2.203E-03	.0564	2.486E-03	.0637	2.501E-03	.0641	.3500		0
31	158.7	2.690	2.324E-03	.0595	2.623E-03	.0672	2.638E-03	.0676	.4000		0
32	160.6	2.872	2.485E-03	.0637	2.805E-03	.0718	2.822E-03	.0723	.4000		.1070
33	155.7	2.771	2.388E-03	.0612	2.693E-03	.0690	2.709E-03	.0694	.4500		0
34	150.8	2.879	2.470E-03	.0633	2.785E-03	.0713	2.801E-03	.0718	.5000		0
35	156.4	2.697	2.326E-03	.0596	2.624E-03	.0672	2.639E-03	.0676	.5000		.1070
37	154.2	2.636	2.269E-03	.0581	2.558E-03	.0655	2.574E-03	.0659	.5500		0
38	151.1	2.734	2.347E-03	.0601	2.646E-03	.0678	2.661E-03	.0682	.6000		0
39	158.4	2.588	2.236E-03	.0573	2.523E-03	.0646	2.538E-03	.0650	.6000		.1070
40	157.9	2.697	2.329E-03	.0596	2.627E-03	.0673	2.643E-03	.0677	.6500		0
41	157.0	2.648	2.285E-03	.0585	2.578E-03	.0660	2.593E-03	.0664	.7000		0
43	163.0	2.522	2.187E-03	.0560	2.469E-03	.0632	2.484E-03	.0636	.7500		0
44	163.8	2.342	2.032E-03	.0521	2.294E-03	.0588	2.308E-03	.0591	.8000		0
45	171.0	2.400	2.096E-03	.0537	2.368E-03	.0607	2.382E-03	.0610	.8000		.1070
46	165.3	2.118	1.841E-03	.0472	2.079E-03	.0532	2.100F-03	.0538	.8500		0
47	164.4	2.050	1.780E-03	.0456	2.010E-03	.0515	2.03HE-03	.0522	.9000		0
48	169.7	1.731	1.510E-03	.0387	1.706E-03	.0437	1.730E-03	.0443	.9000		.1070
49	165.0	1.803	1.566E-03	.0401	1.768E-03	.0453	1.800F-03	.0461	.9500		0
50	160.3	2.013	1.742E-03	.0446	1.966E-03	.0504	2.006F-03	.0514	1.0000		0
51	177.7	2.260	1.986E-03	.0509	2.245E-03	.0575	2.292E-03	.0587	1.0000		.2140

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VA352-21BA

GROUP	CONFIG	MODEL	MACH NO	PO,PSIA	TO,DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL MODEL	YAW
57	1		7.99	545.3	1316	25.13	-4.87	30.00	0	-0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .0175FT)	STFR (R= .0175FT)	SWITCH POSITION
95.6	.056	2.517	3927	4.944E-05	7.694E-08	2.459E 06	3.904E-02	2.596E-02	1

GAGE	TW	QDOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(TAW)	H(TAW)/HREF	X/C	2Y/B
52	177.3	4.518	3.968E-03	.1016	4.486E-03	.1149	4.454E-03	.1141	.0820	.2500
53	172.9	3.408	2.981E-03	.0764	3.369E-03	.0863	3.374E-03	.0864	.3020	.2500
54	168.4	2.754	2.400E-03	.0615	2.711E-03	.0694	2.714E-03	.0695	.4470	.2500
55	162.8	2.554	2.215E-03	.0567	2.500E-03	.0640	2.506E-03	.0642	.5910	.2500
56	177.1	2.500	2.195E-03	.0562	2.482E-03	.0636	2.504E-03	.0641	.7360	.2500
57	175.4	2.518	2.208E-03	.0566	2.496E-03	.0639	2.523E-03	.0646	.8810	.2500
58	191.8	8.730	7.765E-03	.1989	8.795E-03	.2253	8.611E-03	.2206	.0500	.4000
59	181.6	6.394	5.636E-03	.1444	6.376E-03	.1633	6.301E-03	.1614	.1000	.4000
60	169.6	4.740	4.135E-03	.1059	4.671E-03	.1196	4.633E-03	.1187	.2000	.4000
61	154.3	4.135	3.560E-03	.0912	4.015E-03	.1028	3.995E-03	.1023	.3000	.4000
62	162.6	3.638	3.154E-03	.0808	3.560E-03	.0912	3.562E-03	.0912	.5600	.4000
63	156.4	4.223	3.642E-03	.0933	4.108E-03	.1052	4.128E-03	.1057	.7000	.4000
64	157.8	2.600	2.245E-03	.0575	2.533E-03	.0649	2.586E-03	.0662	.9000	.4000
65	181.7	6.682	5.891E-03	.1509	6.664E-03	.1707	6.632E-03	.1699	.1760	.5000
66	166.8	4.785	4.164E-03	.1066	4.702E-03	.1204	4.673E-03	.1197	.4840	.5000
82	168.1	4.401	3.834E-03	.0982	4.331E-03	.1109	4.346E-03	.1113	.7000	.5000
67	157.0	3.429	2.959E-03	.0758	3.338E-03	.0855	3.412E-03	.0874	.9000	.5000
68	178.8	5.830	5.126E-03	.1313	5.797E-03	.1485	5.762E-03	.1476	.1000	.6000
69	163.2	4.538	3.937E-03	.1008	4.444E-03	.1138	4.420E-03	.1132	.2000	.6000
70	161.5	3.333	2.887E-03	.0740	3.259E-03	.0835	3.235E-03	.0829	.4300	.6000
71	156.6	4.122	3.556E-03	.0911	4.011E-03	.1027	4.005E-03	.1026	.6000	.6000
72	156.8	2.703	2.332E-03	.0597	2.630E-03	.0674	2.664E-03	.0682	.8000	.6000
73	158.4	2.806	2.424E-03	.0621	2.735E-03	.0701	2.795E-03	.0716	.9000	.6000
74	190.2	10.179	9.041E-03	.2316	1.024E-02	.2622	1.016E-02	.2604	.1000	.7500
75	189.0	9.854	8.744E-03	.2240	9.900E-03	.2536	9.830E-03	.2518	.3000	.7500
76	170.2	6.106	5.329E-03	.1365	6.020E-03	.1542	5.989E-03	.1534	.5000	.7500
77	164.6	4.105	3.565E-03	.0913	4.025E-03	.1031	4.043E-03	.1036	.7000	.7500
78	162.5	3.750	3.251E-03	.0833	3.670E-03	.0940	3.747E-03	.0960	.9000	.7500
79	191.5	10.972	9.757E-03	.2499	1.105E-02	.2831	1.096E-02	.2807	.1000	.8500
80	162.0	6.809	5.900E-03	.1511	6.660E-03	.1706	6.612E-03	.1694	.3000	.8500
81	188.2	13.418	1.190E-02	.3047	1.347E-02	.3450	1.340E-02	.3433	.5000	.8500
83	194.1	11.811	1.053E-02	.2697	1.193E-02	.3055	1.182E-02	.3028	.1000	.9500
84	161.7	5.639	4.885E-03	.1251	5.514E-03	.1412	5.491E-03	.1406	.5000	.9500
85	181.8	7.933	6.995E-03	.1792	7.913E-03	.2027	8.073E-03	.2068	.9000	.9500